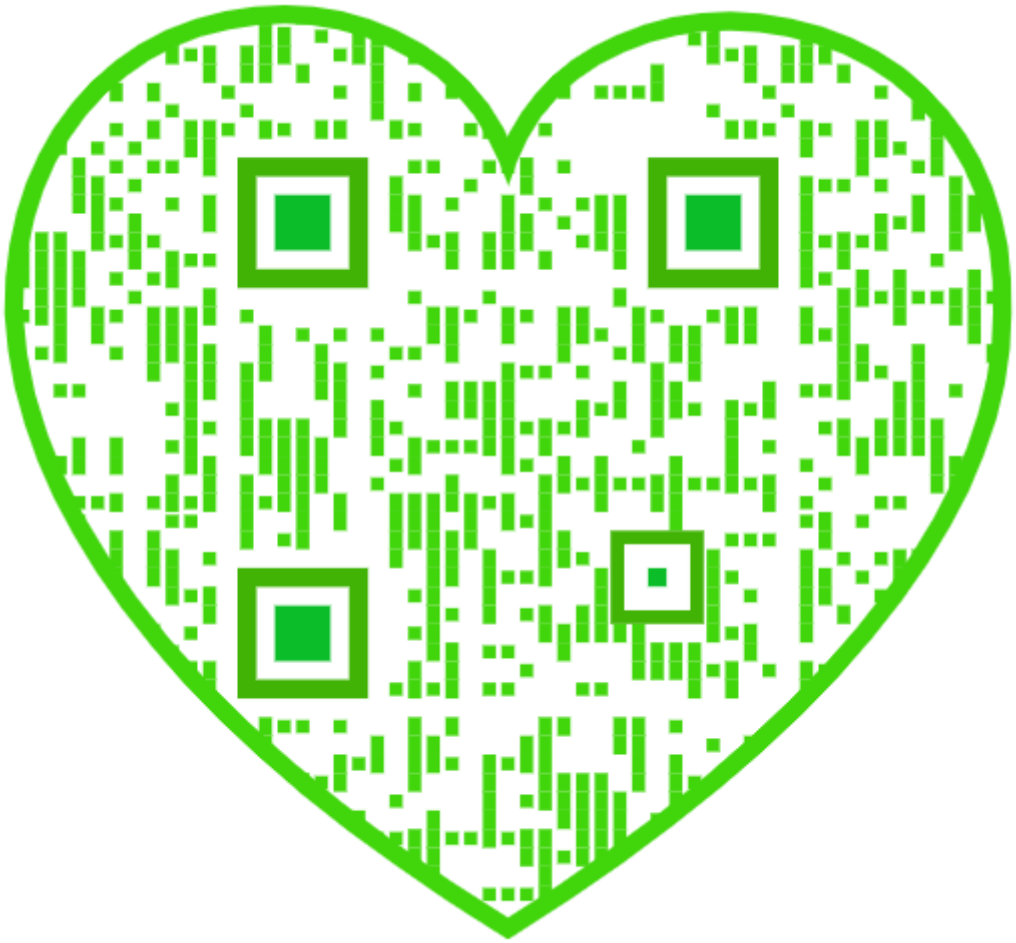

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JANUARY 1954

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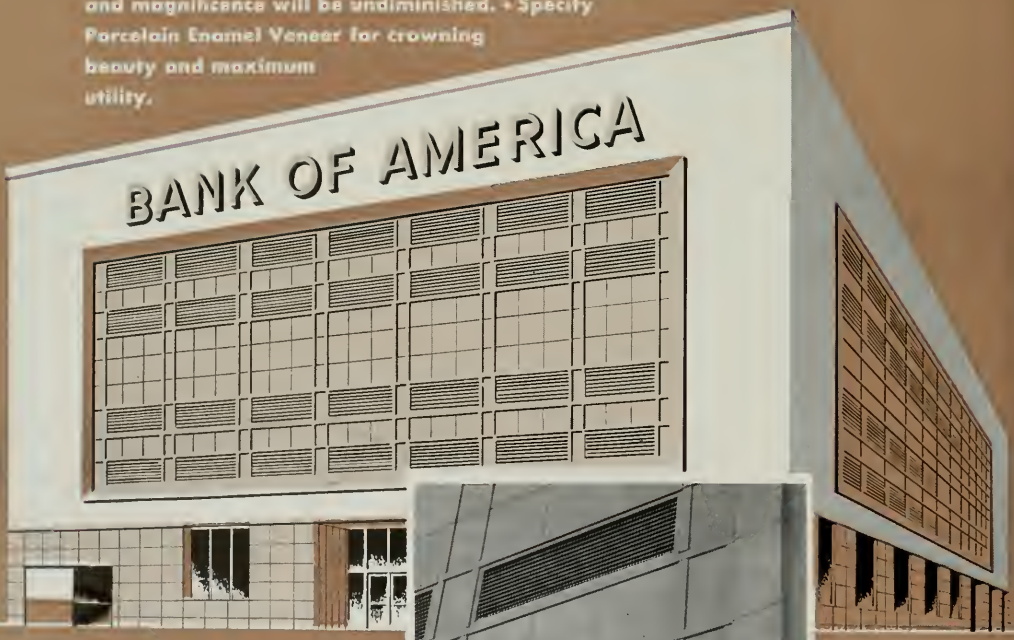

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Vol. 196 No. 1

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★

COVER PICTURE

MODERNISTIC
IN DESIGN

Richmond, California

Not all of today's new building is designed on conventional pattern as is indicated by this commercial office building, and diversity of design to meet specific needs is one of the features of work done by the John J. Moore Company, Builders. For additional details, pictures and story see Page 10.

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. EDITORIAL NOTES .

ERA OF PERSUASION

In the months ahead, the American people are likely to witness a type of sales promotion that will be new and astounding to many.

The nation's manufacturers and great distribution system are moving ahead full-tilt to meet a "selection mood" of the American consumer. Conditions are ripe for a great stride forward in the average living standards of the people. Production is being freed of some of the heavy load of defense responsibilities. New and better and more products are beginning to pour off the assembly lines. And consumer income and savings exist on the highest level in American history.

To meet these basic conditions the time has come for a new, enlightened and intensified brand of salesmanship aimed at greatly increased consumer spending. There are plenty of goods to be sold and consumers have the money to buy, but, they must be persuaded to buy.

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The "stand-in-line" condition, economically, is no longer existant. Today the seller of any product, or service, is up against a consumer independence and it is going to take a lot of "back to fundamental" selling to do the job.

The era of persuasion . . . good salesmanship . . . is coming back.

* * *

The American people are paying two-dollars in personal taxes for every dollar they save.—U.S. Department of Commerce.

* * *

TAX REDUCTIONS JANUARY 1

Considerable emphasis is being placed on TAX REDUCTIONS which will accrue to the individual taxpayer, on January 1, 1954, and being of a curious nature we explored the situation.

You may be interested in our findings!

According to law, almost all taxpayers will get a rate decrease of about 10% as of January 1, 1954. This reduction means that a married man with two children and a monthly salary of $225 will have a take-home pay increase of 10c a month. If he makes $300 a month, he will get an increase of $1.60. If he makes $375, his increase will be $3.00 per month.

BUT! The Social Security tax paid by both worker and employer on the first $3,600 of the worker's annual pay is scheduled to increase from 1½% to 2% on January 1, 1954.

S-O, let's see how generous our members of Congress have been.

The married man with the two kids and $225 per month income gets a big tax reduction of 10c a month, BUT, will pay an additional $1.12 per month for more Social Security; the $300 per month man gets a reduction of $1.60 and will pay an additional $1.50—net tax reduction, 10c per month; and the $375 per month income, with a tax reduction of $3.00, will pay an additional $1.50—or a net reduction of $1.50 per month.

Now, don't rush out and buy a new television, automobile, or home on the strength of your Tax Reductions scheduled for January 1st.

* * *

A soundly built ship may be rocked by rough seas, but it doesn't sink.

* * *

THANK YOU, MR. GREENBERG

December 23, 1953

Mr. Edwin Wilder, Editor,
Architect & Engineer, Inc.
68 Post Street,
San Francisco, Calif.

Dear Mr. Wilder:

The November issue of the "Architect and Engineer" featuring the 100th year of M. Greenberg's Sons existence to me is an outstanding issue, and your thoughts and ideas and kindness in devoting all of the pages to our firm has meant a great deal to me. The reaction I have received from many Architects, Engineers, friends and business associates has all been on the favorable side, bringing a great deal of praise and honor and credit to us, and to your magazine.

We have had the pleasure of distributing it widely to the State Libraries, Historical Societies, etc., and the favorable comments from these associations are all praise in your honor, and the magazine will go down into their archives for future historians to read.

Thanking you again for your splendid cooperation and kindness to us, and with the Seasons' Greetings, I am,

Very sincerely yours,
Stuart N. Greenberg.

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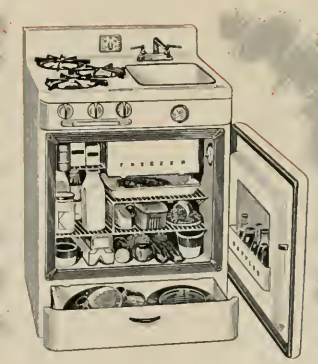

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A PLAN FOR BAY AREA TRANSIT

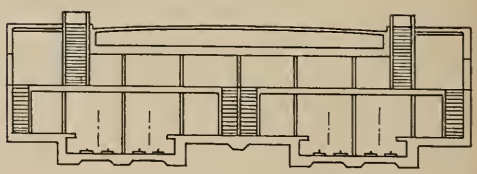
By GEORGE S. HILL, Consulting Engineer

Possibly the most important problem facing both San Francisco and Oakland is to preserve the values and stability of the central business districts. Most authorities agree that improved mass transportation methods and equipment are necessary. Better highways alone will not solve the problem. A large part of the cost for new highways and highway bridges could be avoided by improving and making better use of the rail lines we now have. The railroad companies claim that the highways are built at public expense for the use of their competitors, while they are left to shift for themselves under the burden of very heavy federal and state taxes. Many of the railroads have not been able to change their methods or equipment for several decades, and cannot do so without more public support. If railway taxes were used for the benefit of the railways, or if the funds available for both railways and highways were pooled for the benefit of both, it would be possible to have a coordinated system so planned that each form of transportation would be used in the manner for which it is best fitted. Wasteful duplication would be avoided. Each track of a rail line has a capacity of at least 40,000 persons per hour and is equivalent to many lanes of highway traffic.

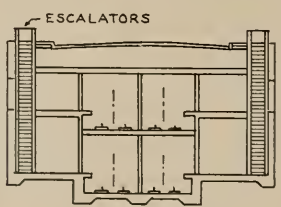
The Master Plan of Boston states that if rapid transit facilities are not extended and improved, the system of expressways recommended will be inadequate to handle the traffic of the metropolitan district. The expressways do not offer a rubber-tired alternative to railborne rapid transit. The downtown street system would be unable to absorb the number of buses that would be required. Opportunities to consolidate rights of way for both highway and rail rapid transit are being studied. After a four-year study, a $100,000,000 plan was recommended to give fast electric train service to some 29 suburban communities. Under the plan, the Boston rapid transit lines would be extended over existing railroad rights of way to provide fast commuter service in electrified equipment that would replace present heavy equipment of steam-drawn trains. By making it possible for workers living in suburban towns to reach the city easily without resorting to their automobiles, the city's growing traffic problem would be partly solved. Any idea that it will ever be possible to provide a street and highway system over which all can ride to work in their automobiles over magnificent freeways, and then find a place to park at a low price should be dispelled from our minds. When mass transit becomes as modern as the automobile, it will again be used. Just as several private rail lines now use the same tracks, so it may be possible by agreement to plan for joint operation of the public and private lines. Recent reports issued by the San Francisco Bay Area Rapid Transit Commission emphasize the importance of developing mass transportation as early as possible, yet a program is being advanced which may destroy any possibility of achieving it. In cities which are practically level, the question of routes presents no problem as to grades, but in San Francisco the choice of level routes is limited.

On account of changes in the runways and use of the Alameda Naval Air Station, a bridge from the foot of King Street in San Francisco to the Oakland Pier, once proposed by the writer, would now be impossible. Also, unless there should be some modification of the Army-Navy ruling requiring that such a crossing would necessarily be by tubes only, with a clear depth of 50 feet for navigation for the entire four-mile crossing, it would be impracticable to build a main line crossing in this location because of the long and costly land approaches required. The Army-Navy Board recommended tubes for interurban lines only, from the Oakland Pier to the foot of Howard Street in San Francisco, with a maximum grade of 3%, but the Tudor Report of 1949 has this statement:

"The Board was of the opinion that new transbay facilities were necessary to permit trains to operate at substantial speeds and their report stated that 'trains must run at restricted speeds in order to keep impact loads on the structure within design limitations.' This is not the case and trains could now operate on all parts of the bridge up to 38 miles per hour if they were equipped with power and brakes. If desired the signals could be reset for greater speeds. The bridge is not the controlling factor and therefore there is no need to spend an amount that would run to at least $73,733,000 simply to speed trains across the Bay. It would appear that if transbay mass transportation is to be improved it can best be done for the least cost by improving distribution facilities in the East Bay and speeding up trains on the bridge. The latter would be inexpensive and relatively easy to do."



MARKET STREET SUBWAY



TWO-LEVEL SUBWAY

TYPICAL SECTIONS AT STATIONS

In the design of railroad bridges, the chief element of cost is to provide weight-carrying capacity for two locomotives at the front end of the train. In the case of rail diesel cars or electrical equipment, each car is separately powered, thus making it possible to distribute the weight sufficiently to use

such equipment without exceeding the allowable loads on the Bay Bridge. Even light baggage, mail, and express cars could be used.

It is not generally known that the California Toll Bridge Authority Act permits the extension of the Bay Bridge rail lines for a distance of 50 miles from either end of the bridge. The extension and improvement of the Bay Bridge rail lines can be made to serve the business districts of the two cities without cost to the taxpayers, provided that nothing is done to restrict the use of tolls for the purposes enumerated in the California Toll Bridge Authority Act. The construction of tubes, tunnels, subways, underpasses, or overpasses, and transportation facilities generally, are specifically authorized under the Act.

When the Bay Bridge was built, there were many who were dissatisfied with a single stop terminal in San Francisco, while permitting unlimited distribution of passengers in the East Bay. The inconvenience of transferring more than once, and the necessity of paying an additional fare of 30 cents a day are two of the reasons why people are not using the Bay Bridge trains more. There is now a practicable solution for bringing interurban trains directly into San Francisco to an uptown terminal such as San Francisco has always wanted and thought the City was getting when the Bay Bridge was built. By reconstructing a portion of the terminal loop, connections can be made at First Street both with the Peninsula lines and the San Francisco subway system.

The street plan of San Francisco is well adapted to trunk line location and operation. The most practical idea would be to consider Market Street from First to Twelfth as an elongated terminal with about seven subway stops. As this would provide a trunk line for the entire Bay Area, not less than four tracks should be constructed, and these made interchangeable in use. What might be designated as an overlap system could be provided, by which the lines from across the Bay and down the Peninsula would terminate at Twelfth Street, and those from the Twin Peaks Tunnel and other parts of San Francisco would terminate at First Street. Through operation is also possible if justified by conditions. The subway tracks would be arranged to permit normal loading, with a wide platform between the two sets of tracks. In Chicago this center platform is 3500 feet long. As both express and local trains would doubtless make all stops in the downtown area, there would be no necessity to transfer from one to the other except from the same platform. A continuous mezzanine concourse would extend from Grant Avenue to Twelfth Street, permitting continuous movement of pedestrian traffic along and across Market Street, to the basements of the stores, and to the track platforms below. Passengers could enter the subway on the most convenient side of the street and avoid crossing Market Street at grade. Escalators would be used where needed, and the space would be well ventilated and air conditioned. There would be space for the public utilities over the mezzanines. A storm sewer with an inside diameter of 8½ feet extends in Howard, Second, Market, and Sansome Streets. In order to avoid this and also to build a subway in the heart of the financial and retail districts where it is most needed, it is proposed to continue from First Street into Bush Street with a stop at Bush and Montgomery, thence turning into Grant Avenue with a stop between Geary and Post Streets. From Grant Avenue the lines would extend out Market Street with stops between Fourth and Fifth, Sixth and Seventh, Eighth and Ninth, and at Twelfth Street. Geary Street as a subway route intersects Market Street too far downtown to serve Market Street effectively, although it has been proposed at various times. McAllister Street, mentioned in the Arnold Report as a suitable route, has the advantage of serving the Civic Center area, and has a practically level grade. It was planned to return to Geary Street, passing diagonally under Jefferson Park. On account of the redevelopment plans for the Western Addition it is now recommended that Eddy Street be used west of Laguna Street connecting with Geary Street and the Golden Gate Bridge farther west. The south branch through the Mission District would occupy the Mission Freeway as proposed in the DeLeuw Report. Two of the four tracks would extend through the Mission District and two would proceed out Market Street for the tunnel lines.

It is proposed that coach terminal tracks be provided at Twelfth and Market Streets and extended under West Mission Street of sufficient length to provide for the maximum length of train which might be used. The mezzanine floor would be at the elevation of West Mission Street and the main floor would either be continued in its present commercial use or be used for the parking of buses or automobiles. It is only one block from the Bayshore Freeway connection. A coach yard would also be provided at First Street for the San Francisco lines terminating there. Robert Ridgeway, the New York subway expert, disapproved of the use of a terminal loop as an unjustifiable expense, and this is particularly true for train operation.

In proposing a subway system for Oakland, it is desirable to consider the historical background of rapid transit in the East Bay area. In many respects, particularly in Alameda and Fruitvale, the service was superior before the Bay Bridge was built, to that which we have today. It must be recognized that East Bay transit has been and still is a distribution system and not a terminal system. With the rapid growth of Oakland, the necessity of considering its business center as a terminal area also, has created new problems. Because of the many branches in the distribution system and the necessity for complete grade separation, it is proposed that the more important lines be given priority, allocating to Oakland about the same expenditures as for San Francisco. With this in mind, it would seem to be necessary and logical to have a north and south trunk line connecting the three East Bay cities of Berkeley, Oakland, and Alameda. As the Bay Bridge rail line is the only available connection with San Francisco, it is proposed that it be continued with separated grades to intersect this trunk line at right angles. Shattuck Avenue and a portion of Adeline Street in Berkeley would seem to be a natural choice for the line.

Thence it might occupy the center strip of a freeway to be located in the long block between Grove Street and Telegraph Avenue, but preferably

(See Page 36)

DOWNTOWN MERCHANTS GARAGE — Oakland, California

OPERATION—BUILDING

THE JOHN J. MOORE COMPANY

By FRED W. JONES

Presented herewith is a carefully selected portfolio of an interesting number of buildings designed and constructed by the John J. Moore Company of Oakland and Los Angeles. Many of these structures reflect the modern trend in commercial and industrial design and they also include shopping centers, factories, office buildings, and allied accessories such as customer parking facilities.

Growth of the John J. Moore Company during the past ten years has been rather unusual, even for the West, where a great expansion in all types

MAIN FACADE details of the Alameda County-East Bay Title Insurance Company—Oakland.

ENTRANCE and corner detail of the new Duchess Sandwich Shop (right) in Oakland.

WILLIAM STANWELL Building in the City of Oakland is shown below.

of construction has taken place since the close of World War II. Particularly is this firm's expansion outstanding, when one takes into consideration the nature of the company's operations. The Moore company does no competitive work whatsoever. They limit their activities to work for a select group of clients, and on a fee basis solely. The company supplies a "package" service, i.e., they include the architectural, engineering and construction factors in their work consideration, and in some instances even the financing is included.

The company was started in 1924 and functioned as a one-man organization until 1939, when a partnership was formed with Maxwell Reid. It was changed to a corporation upon the death of John Moore in 1942. The stock ownership of the corporation was held jointly by Mrs. John J. Moore and Maxwell Reid, which continues to this day.

JOHN J. MOORE CO. . . .

OFFICE of Maxwell Reid, President (seated at desk), John J. Moore Company, and (below) General Offices in Beverly Hills, California.

The operations of the company have steadily expanded through the years from small industrial buildings to large commercial and industrial projects, multi-story parking structures and shopping centers. Company operations cover the entire state of California. Work in the southern part of the state has reached such proportions as to require an additional office in the Los Angeles area, opened in the summer of 1953.

One of the most important assets of the company is its ability to complete work ahead of schedule. Every job is a challenge to establish a new record. This is only possible because of the fact that an entire project, including design and engineering, is handled within its own organization, and all of the delays due to changes that may require meetings and consultations with owners, architects and engineers are entirely eliminated. The result is tremendous savings in time and money.

In spite of the volume of work that the company is doing, it is not considered a large organization. But it is made up of a small knit, closely integrated group, well versed in the many phases of the business, and is thus able to do a job that would normally require a much larger force.

Personnel of the Moore staff in the Oakland office includes Russell Cooley and Jerry A. Moore, structural engineers, Sue Cooley Greenlaw, Sewell Smith and Robert Lustig, architectural designers.

The construction of shopping centers forms a

challenging phase of the Moore Company's varied projects. Locations of these centers are in many of the growing small city areas, such as National City, near San Diego, Fresno, Sacramento and the Los Angeles area. Mayfair stores, also designed and built by Moore, are located in many of these shopping centers.

Two buildings recently completed in Hayward for Grodins and Weinstein probably combine an all-time record for speed. Seventy-one days after the decision to build, not only was the construction done, but the stores were completely stocked and

ENTRANCE and Interior Views of Beverly Hills offices.

ready for business to meet the requirements of opening before the holidays.

One of the more recent jobs that has earned the company deserved praise is the Downtown Merchants Parking Garage in Oakland. Finished a full month ahead of schedule, the structure covers an entire block, is constructed of steel and concrete and has a parking capacity of 2800 cars.

The building provides almost unobstructed entry and driving way visibility. Structural columns and girders were kept at a minimum so that motorists would not have to maneuver about them. Ramps leading to upper and lower parking levels were also designed with driving ease in mind. They have only an 8 per cent grade rising ten feet over a distance of 120 feet.

The garage is designed for a minimum of turns in entry and exit. Ramps leading down and up

TILT-UP PANELS

The 12-ton concrete slab, being installed at the new Sylvania Electric Electronics Plant in Mt. View, California, is picked up by large crane and snaked out backwards between roof supports; is then "tilted-up" into proper position.

The elapsed time for installation of each section is 13 minutes.

to both levels are straight lines from the entrance on Webster Street and the main exit on Franklin Street. An additional exit on 14th Street is used during rush hours.

The structure is lighted by fluorescent tubes on the ground and lower level and by mercury vapor lamps on its open upper level; has an air conditioning system on the lower level adequate to give a complete change of air every six minutes. The building contains 1500 tons of structural steel and 11,000 feet of concrete.

The excavation task was a huge one. Ariss-Knapp hauled three thousand five hundred heavy truck loads of dirt in 21 days. Four of the foundation footings are 84,000 pound blocks of concrete. The other footings weigh from 52,000 to 56,000 pounds each and rest on solid rock. Transit mixing cement trucks made well over 900 trips to the parking lot site.

A unique feature of the construction, one that eliminated the racket of riveting guns, was welding all beams reinforcing the concrete frame. This

(See Page 20)

JOHN J. MOORE COMPANY

Builders

The following firms, participants in the construction activities of the John J. Moore Co., have display advertisements in this issue:

ANDERSON, CARL E., ready-mix; ALADDIN HEATING CO.; ARISS-KNAPP CO., grading; AUTOMATIC SPRINKLER ENGINEERING CO.; BASALT ROCK CO.; CARDARELLI, G. E., concrete; CLAUSEN & CLAUSEN, lathing & plastering; EAST BAY BLUEPRINT & SUPPLY CO.; EAST BAY GLASS CO.; FIBERGLAS ENGINEERING & SUPPLY CO., glass; FIDELITY ROOF CO.; GLADDING, McBEAN & CO., ceramic veneer & tile; HAWS DRINKING FAUCET CO.; JEROME & HORNER, sheet metal; JOHNSON, ARTHUR, plumbing contractor; KRAFTILE CO., tile; LENA, NAT, concrete construction; REED, FLOYD F., Construction Co.; SCATENA YORK CO.; SCHWARTZ & LINDHEIM, electrical; TIMBER STRUCTURES.

TILT-UP PANELS
Being lifted into position.

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Pages 14, 15

ADDITION TO WILSHIRE METHODIST CHURCH — Wilshire Boulevard

DESIGNED TO SERVE THE CHILDREN

LOS ANGELES

ALLISON AND RIBLE, Architects

Since World War II more attention has been paid to needs and problems of young children—and their parents—than ever before. Especially in communal activities such as playgrounds, schools, churches, shopping centers, theaters and the like.

These progressive methods have been adopted by many of the nation's forward-looking churches. Although most churches have always included services and instruction for the young, the very young, those of kindergarten age, were sometimes overlooked.

Since churches are constructed primarily as places of worship and sanctuary, many of them were built without adequate facilities for children. But more and more, the importance of the very young, the babies, has entered into the picture and many churches are building additions designed primarily for child care and instruction.

ENTRANCE . . . To Children's division.

One such is the Wilshire Methodist Church in Los Angeles under the leadership of Drs. Theodore Palmquist and Calvin E. Holman.

Noting the rising birthrate among their congregation, with its resulting baby-sitting problems, Drs. Palmquist and Holman decided on an addition to their original building, which was constructed in 1924.

With cooperation and guidance of George B. Allison, architect of the firm, Allison and Rible, and a member of the church, Drs. Palmquist and Holman planned an addition to their building, to be known as the Church School.

Recently completed, the addition is a model of the facilities necessary for youth care and recreation.

Allison and Rible designed an 11,000 square-foot, two-story concrete structure capable of accomodating children from the age of two months upward.

Included in the $175,000 addition are nurseries, playrooms, a play-yard, classrooms, kitchens and a little chapel capable of seating 120 persons.

The nurseries and toddlers' rooms, decorated with drawings dear to a child's heart, have available bassinets, blankets and equipment, including a kitchen where formulas and food may be prepared for the infants. A registered nurse cares for the children while the parents attend services.

The multi-purpose building is divided into areas for every age group and during the week certain facilities are made available to such older youths' organizations as the Boy Scouts, Girl Scouts and Cub Scouts.

Classrooms are provided for the various age groups and certain of the church's administrative offices are also housed in the reinforced-concrete addition.

NURSERY ROOM . . . A registered nurse cares for children.

CHAPEL . . . Designed for use of the congregation's children.

PHOTOS BY
Fred R. Dapprich

PLEXOLITE PLANT

LARGEST IN WORLD

El Segundo, California

Among Southern California's newest manufacturing plants is the interesting and unique Plexolite Corpn's ultra-modern production facilities and combination general offices and manufacturing building, built in the city of El Segundo.

Designed to serve a highly specialized type of building material product manufacturing process, and at the same time offer facilities for general offices, the building incorporates a number of unusual features, and according to David S. Perry,

TRANSLUCENT
Shatterproof
Permanent

Roof for this patio and its masonry barbecue.

An invitation to outdoor living.

president, "not only meets our requirements for the present and immediate future, but provides us with a plant capable of being expanded to meet ever growing needs of the company."

One wing of the building, containing the offices and management facilities, is of functional design with consideration for ample lighting, air conditioning, heating, and employee utility uses. A second portion of the manufacturing plant utilizes liberal use of the product manufactured by the firm with walls of Plexolite.

Walls adjacent to manufacturing equipment are of reinforced concrete and floors are of concrete. Overhead fluorescent lighting supplements natural daylighting, while ceiling skylights are covered with the firm's glass fiber, reinforced plastic panels.

Sufficient floor space has been provided to permit installation of five additional production lines when needed. The particular production lines used again represent the very newest and are the only continuous production systems in existence in this industry.

A number of illustrations on these pages show various uses of the company's product, and a diversity of installations.

A new function is performed as part of a guard-rail on the lanai of a large apartment hotel — shatterproof and fire resistant, it meets safety code requirements.

Sunset Lanai Apartments
Los Angeles.

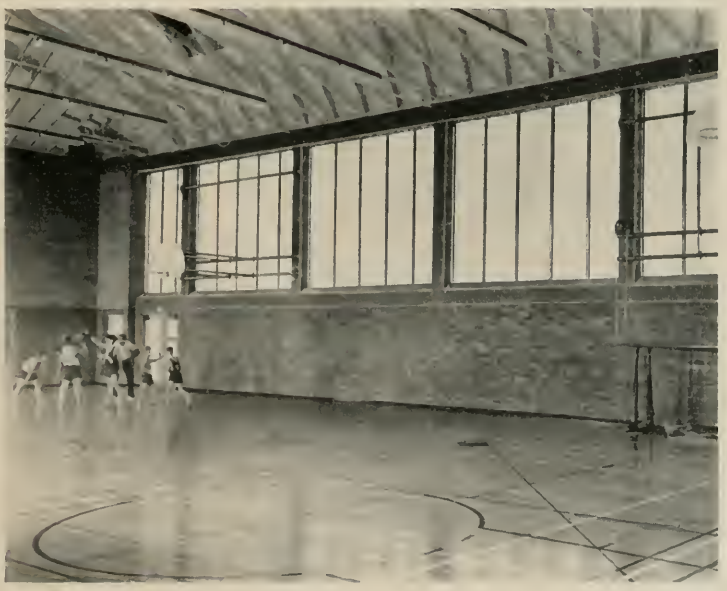
Edward H. Fickett, AIA,
Architect

PLASTIC BUILDING PANELS

It eliminates the usual wire guards and expensive wire glass and provides diffused light instead of dazzling sunglare.

Interior of Inglewood, California, YMCA Building.

Roscoe L. Woods, AIA, Architect.



JOHN J. MOORE CO. . . .

(From Page 15)

MAYFAIR MARKET
Redwood City

practice is highly unusual in a building of this size, according to Douglas Nye, the superintendent of construction.

The Sylvania Electric Company's $500,000 laboratory building at Sunnyvale was another Moore building achievement deserving of more than passing notice. The job has been aptly referred to as the "new look in tilt-up technique."

Wood framing for the 35,000-square-foot ware-

DISTINCTIVE "FRAMING"
FOR THIS MONTH'S COVER PICTURE

Glued-laminated arches of our own design and manufacture provide functional as well as distinctive framing for our own office building, subject of this month's cover of Architect & Engineer. John J. Moore Company, Engineers and Builders.

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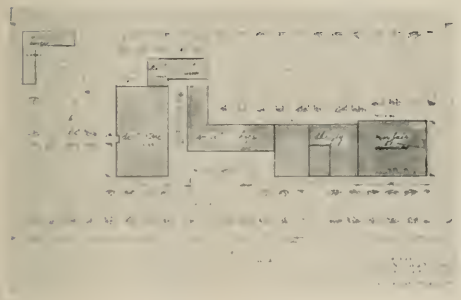
SHOPPING CENTERS—The Manchester Gardens at Fresno (top) and the Arden Way Shopping Center of Sacramento (below).



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PAPS MOTORS — Sunnyvale

Exterior (left) and interior (above) show excellent detailing and design of automotive agency and service building.

house was erected with eight by eights forming the main roof supports. Concrete Contractor Giulio Cardarelli then moved in with his crew and began placing the first of the floor slabs. Once these had set, Cardarelli's men applied the compound that

(See Page 34)

ALADDIN HEATING CORPN IN NEW HEADQUARTERS

The Aladdin Heating Corpn, manufacturer and distributor of heating, ventilating and air-conditioning equipment, has moved into its new plant at 1111 West Avenue, San Leandro, California, consisting of a two-story office building and four plant buildings totaling 82,000 sq. ft. of space under one roof.

One and one-quarter acres of concrete slab has also been installed on which future units will be built and will serve at present for a hard-surface parking area for truck operations.

The new plant, when completed, will represent an investment of $600,000, and a total work area of 150,000 sq. ft., together with 8,400 sq. ft. of office space, according to S. W. Terry, Aladdin president.

AN INVESTMENT BLUEPRINT for ARCHITECTS & ENGINEERS

By FRANK J. KIHM*

Mutual funds are companies making a business of investing the money of many individuals in stocks and bonds. If you buy shares of these companies you are, in effect, retaining them to manage your money in the securities market. You are conceding that their economists, statisticians, and analysts know more about the purchase, supervision, and sale of securities than you, and you are willing to pay a moderate cost to have them select and hold securities in which you own a proportionate interest. That interest may be your investment of as little as $100, or as much as $100,000, but the same principles apply in both cases.

FRANK J. KIHM
Consultant H. E. Work & Co., San Francisco

The choice of the right mutual fund by the individual might be compared to the selection by the builder of an architect for a particular structure or an engineer for a construction project. Professional men, whether they are in these fields or are physicians, dentists, or lawyers, tend to specialize and some are better qualified for certain situations than others.

Likewise a certain mutual fund may do a better job for the individual investor than another, and there are more than 150 of these investment companies operating at present. There are funds devoted to certain industries including chemicals, aviation, building companies, mining, petroleum, tobacco, utilities, and steel. There are mutual funds confining their investments to bonds and which hold no stocks in their portfolios.

You can buy mutual funds covering a cross section of Canadian industry and thus participate in the growth and development which appears to lie ahead for our northern neighbor.

Atomic energy will be the subject of another specialized fund. According to a recent report in the Commercial and Financial Chronicle, "the Atomic Development Mutual Fund, Inc., filed a registration statement with the S.E.C.

"The corporation," it stated, "will invest in 'activities resulting from atomic science.' Mr. Newton I. Steers, Jr., until recently with the Atomic Energy Commission as assistant to the assistant general manager, will be president of the new fund."

There are funds concentrating in securities of industries in selected localities of the United States. Texas Fund, Inc., an interesting example, was organized in 1949. The Texans who organized this fund stated with surprising restraint that "the record of growth and development of the Southwest, the existence therein of substantial natural resources, comparatively inexpensive industrial fuel, and favorable year-round working conditions combine to establish this area as one in which growth is a marked characteristic." This fund, incidentally, has been growing rapidly thus evidencing the ebullience that is typical of Texas. Offering price of the shares ranged between $3.53 and $3.96 a share in 1949. At the end of 1953 Texas Fund could have been sold for $5.16 a share.

Whether specialized or general, all mutual funds have the following characteristics in common: continuous professional management, diversification over many securities even among the specialized funds, ready marketability, and convenience. In addition there is a sales charge to the investor, averaging 7½%, covering the purchase of these securities. There is no charge when mutual funds are sold.

EDITOR'S NOTE: Mr. Kihm is well qualified to discuss the investment needs of professional people. He was Executive Secretary of the San Francisco Medical Society from 1945 to 1952, and City Editor of the Wall Street Journal (San Francisco) from 1939 to 1945, and has contributed articles to Barron's and other business publications. He is now with the San Francisco investment banking firm of H. E. Work & Co. This is the fourth of a series of special articles written for ARCHITECT & ENGINEER magazine by Mr. Kihm. Another article will appear next month.

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SAN DIEGO CHAPTER

The January meeting was a "Chapter" night with Clair W. Ditchy, president of the AIA, in attendance and discussing Institute matters. President Donald Campbell also called upon Richard L. Pinnel, secretary of the Chapter, for a report, and Edward G. Holliday, treasurer, reported on the finances, while other Committee chairmen reported on activities of their respective committees.

The Chapter will have an exhibit at the Home and Garden Show which will open in Balboa Park in March.

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PASADENA CHAPTER

Wallace C. Bonsall was installed as president of the Chapter for the new year at the January meeting, which was also observed as the annual Ladies Night and featured the installation of the Women's Architectural League officers for the ensuing year, and the installation of officers for the Junior Associate Group.

Raul de Smandek, Brazilian Consul, entertained with a film of Brazilian architecture and natural wonders.

Recent new members include: Ken Rhodes, transfer from Chicago; Doug Byles, Lyman Ennis and Byron Tharaldson, Corporate Members. Junior Associate members Ralph Arnold, Charles Cowen, Bob Ewing, Fred Friedman, Bill Garrett, Jack Hovde, Ken Kruger, Kurt Meyer, Alex Levasheff, Kurt Steinmann and Bill Swords.

SOUTHERN CALIFORNIA CHAPTER

Ulysses Floyd Rible was installed as President of the Chapter for 1954 at the January meeting which was highlighted by a talk on The American Institute of Architects by President C. W. Ditchy. His subject was purposes and activities of the Institute.

Other officers elected to serve during the new year included Kemper Nomland, Vice-president;

Orange County Chapter:
Paul O. Davis (Los Angeles), President; Ralph Modjeski (Santa Ana), Vice-President; Geo. Lind (Newport Beach), Secretary; Wm. L. Faulkner (Santa Ana), Treasurer. Secretary's Office: 2919 Newport Blvd., Newport Beach.

Oregon Chapter:
Holman J. Barnes, President; Albert W. Hilgers, Vice-President; Donald W. Edmundson, Secretary; DeWitt C. Robinson, Treasurer, and H. Abbott Lawrence, Trustee. Office of Secretary, 325 Henry Bldg., Portland.

Pasadena Chapter:
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San Diego Chapter:
Donald Campbell, President; Victor L. Wulff, Jr., Vice-President; Richard L. Pinnel, Secretary; Edward G. Holliday, Treasurer; Louis A. Dean, Director. Office Sec., San Diego Trust & Savings Bldg.

San Joaquin Chapter:
Maurice J. Metz (Fresno), President; Allastair Simpson, Vice-President; Al Bailey, Secretary; Robert Stevens, Treasurer. Directors: David H. Horn, Wm. Hyberg, Robert Kaestner. Secretary's Office, Fresno.

Santa Barbara Chapter:
Miss Lutah Maria Riggs, President; Roy C. Wilson, Vice-President; Chester L. Carjola, Secretary; Roy W. Cheesman, Treasurer. Carres. Secy.; Richard B. Nelson, 3033 Calle Rosales, Santa Barbara.

Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
John S. Detlie, President; Ralf E. Decker, 1st Vice-President; Edwin T. Turner, 2nd Vice-President; Wendell H. Lovett, Secretary; Arnold G. Gangnes, Treas. Directors Paul Thiry, William J. Bain, J. Emil Anderson and Robert B. Price. Dayis Holcomb, Ex-Sec., 409 Central Bldg., Seattle 4.

Spokane Chapter:
Tom Adkinson, President; Carroll Martel, Vice-President; Harry Weller, 2nd Vice-President; William James, Secretary; Lawrence Evanoff, Treasurer. Office of the Secretary, W. 524 - 4th Ave., Spokane.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lawe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

Francis Merchant, secretary; William Woollett, treasurer and C. M. Deasy, three-year director.

William Glenn Balch will serve as delegate-at-large on the California Council of Architects.

Other guests at the meeting were Governor Goodwin J. Knight, and Norris Poulson, Mayor of Los Angeles.

WOMENS ARCHITECTURAL LEAGUE SOUTHERN CALIFORNIA CHAPTER

Mrs. C. Day Woodford was elected president of the Women's Architectural League of the Southern California Chapter for 1954.

Serving with her will be Mrs. Stanley Gould, Vice-president; Mrs. Joe Jordan, treasurer; Mrs. Anthony Thormin, secretary, and Mrs. J. A. Murrey, recording secretary.

NORTHERN CALIFORNIA CHAPTER

Members attended a special meeting of the Junior Associates this month to hear Lawrence Halprin, Landscape Architect, discuss "Design in the Garden," a subject which he illustrated with color slides.

Halprin is Supervising Landscape Architect for the Berkeley campus of the University of California.

OREGON CHAPTER

"Architect in the News" was the theme of a recent meeting which brought together Merlin Blais of the Oregonian, Lew Evans of the Daily Journal of Commerce, Vernor Schenck, Public Relations Counsel, and Bob Fritsch as the Moderator, in a general discussion of news and the architect.

Recent new members include: Loyal C. Lang (Corporate), John Hinchcliff, transfer from Southern California, and Andre Lamoreaux (Associate).

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Structural Engineers Association of Northern California

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Structural Engineers Association of Central California

William H. Peterson, President; Walter S. Wassum, Vice-President; O. T. Illerich, Sec.-Treas.; Ernest D. Francis, M. A Ewing, and Arthur A. Sauer, directors. Office O. T. Illerich, c/o Div. of Arch., Sacramento.

American Society of Civil Engineers Los Angeles Section

Sterling S. Green, President; Ralph W. Spencer, Vice-President; Walter B. Hollingsworth, Vice-President; C. Martin Duke, Secretary; Gilbert W. Outland, Treasurer. Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

AMERICAN SOCIETY OF CIVIL ENGINEERS

The country's oldest national organization of engineers, the American Society of Civil Engineers, entered its 102nd year on November 5th, 1953.

Established by ten men it has grown to a membership of over 36,000; is divided into four zones, and has some 74 sections together with a number of sub-sections. In addition the organization has student chapters in 134 universities with a membership of 10,000.

As early as 1820 engineering was taught in the American universities and the term "civil engineer" was adopted to differentiate his practice from that of the military, which was regarded as the all-embracing practice of engineering.

Today the general practice of engineering involves 130 professional groups in the United States with a total membership of over 400,000.

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STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"The Stress Analysis of Flat Slab Structures by Model Investigation" was the subject of a talk by Gerald Bowen, President of the Presan Corpn of Los Angeles, at the January meeting in San Francisco.

At the annual meeting Michael V. Pregnoff was elected president and chosen to serve with him as officers for the ensuing year were: Howard A. Schirmer, Vice-president; James L. Stratta, Secretary; William K. Cloud, Treasurer, and Cecil H. Wells, Jr., Assistant Secretary. Named as members of the Board of Directors were: G. A. Sedgwick, Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long, and Pregnoff and Schirmer.

New Members. Donald V. Roberts, Staff Engineer for Dames & Moore, and Donald M. Teixeira, Structural Engineer with John A. Blume have been elected Junior Members.

SERIES OF SPRING TALKS ON ENGINEERING AT UCLA

The University of California Extension's division of engineering will present a series of Spring lectures on "Engineering Aspects of Modern Human Environment" starting the latter part of this month.

Prof. Abel Wolman, of Johns Hopkins University, will give the first lecture, dealing with "The Hydrological Cycle and Its Management." Other lectures will include the subjects of Sanitary Engineering, etc.

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
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J. G. Wright, President; J. E. Rinne, Vice-President; Howard C. Wood, Vice-President; John S. Longwell, Past President; H. C. Medbery, Secretary, and Richard C. Clark, Treasurer. Office Secretary, S. F. Water Dept., Millbrae.

Structural Engineers Association of
Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of
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Lewis R. Ellingwood, President; Robert M. Banney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

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SPRING MEETING NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

The Spring meeting of the National Society of Professional Engineers is being held the latter part of this month in Albuquerque, New Mexico, with T. Carr Forrest, Jr., president of the Society, in charge of the program which will be devoted to a discussion of engineering problems.

AMERICAN SOCIETY OF CIVIL ENGINEERS—Los Angeles

Sterling S. Green was chosen president of the Los Angeles Section ASCE at their annual meeting. Elected to serve wtih him were: Ralph W. Spencer and Walter B. Hollingworth, vice-presidents; C. Martin Duke, Secretary, and Gilbert W. Outland, treasurer.

Speakers at the meeting included Donald E. Neptune, A.E.A., and John S. Gregory, C.E.; Lt. John R. Anderson, C.E., USNR, and John K. Minasian, A.M., ASCE. Their subject was the construction of 117 precast concrete buildings at the Marine Corps Artillery Training Center at Twenty Nine Palms.

ILLUMINATING ENGINEERING SOCIETY NORTHERN CALIFORNIA SECTION

A dramatic lighting display was recently shown in the Marines Memorial Club, San Francisco, with emphasis being placed on lighting effects obtainable in school and church auditoriums, halls, stages, and in homes and gardens.

The showing was jointly sponsored by the San Jose Chapter and the Northern California Section of the IEC, with various equipment supplied by the Kliegl Lighting Company of California and the C. J. Holzmuller Company.

WILLIAM T. WRIGHT NAMED BY GOVERNOR

William T. Wright, Los Angeles, Structural Engineer, has been appointed to the California State Board of Registration for Civil and Professional Engineers by Governor Goodwin Knight, to fill the unexpired term of the late Paul Jeffers, which runs to January 15, 1955.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The new year started with a program devoted to the subject of "Design for Welding," other subjects announced for future programs by the Program Committee included "Design for Welded Structures," "Earthquake and Parapets," "Earthquakes," and subjects dealing with atomic energy.

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PRODUCER'S COUNCIL PAGE

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Treasurer, Carl Frank
Detroit Steel Products Co.
Russ Building

Edited by Stanley L. Basterash—WESTERN ASBESTOS COMPANY

Council Officers and Members . . . Annual Business Meeting, Comstock Room of the Palace Hotel, San Francisco, on December 14th, 1953.

PRESIDENT'S MID-YEAR REPORT

I believe we are all entering 1954 with a feeling of confidence, but also with the knowledge that we must all be a little more efficient, concentrate a little more on the task at hand, and work a little harder to maintain our position—whether we be businessmen, professional men, or members of an organization such as the Producers' Council. The last six months have been good ones for our Chapter and yet we know that more effort must be made to continue our success. In briefly reviewing these last few months of our Chapter activities, I would like to point out some of our activities and try to

(See Page 32)

ATTENDING—Front Row (left to right) A. L. West, Jr., Aluminum Co. of America; Harris M. Wilkinson, Pittsburgh Plate Glass Co.; C. T. Bakeman, C. T. Bakeman & Assoc.; Roland S. MacNichol, Libby-Owens-Ford Glass Co. SECOND ROW: Stanley L. Basterash, Western Asbestos Co.; John C. Cowley, The Brookman Co., Inc.; John J. O'Conner, H. H. Robertson Co.; Peter C. Christensen, Truscon Steel Co.; William L. Daniels, F. Pinney Inc. and Richard C. Peterman, E. F. Hauserman Co.

USE QUALITY PRODUCTS — MANUFACTURERS OF QUALITY BUILDING PRODUCTS FOR PRODUCERS' COUNCIL — CONSULT AN ARCHITECT

BONDS VOTED FOR NEW COUNTY OFFICES

Drawings are being completed by architect Donald L. Hardison for the construction of a new $1,350,000 County Office and Courts Building to be built in Richmond's Civic Center.

The new building will be of 3 story, with basement, reinforced concrete construction with some steel and a brick veneer exterior. It will be 62x62 ft.

Funds for construction of this newest addition to Richmond's growing Civic Center are available through approval of a bond issue at a special election.

MEDICAL BUILDING

Plans for construction of a Medical Building comprising 1500 sq. ft. in Los Angeles have been announced by Architects Absmeier & O'Leary of Los Angeles.

The building will be of composition roofing, concrete slab floors, plaster walls and ceilings, forced air heating, aluminum sash, plate glass and asphalt paving in parking area.

OFFICE SITE PURCHASED

Announcement has been made by the General Petroleum Company, San Francisco, that they have purchased a site at 20th Avenue and Isabelle Street in San Mateo, and will soon start construction of a $300,000 new office building.

The structure will be of 1-story reinforced concrete and will contain 25,000 sq. ft.

STUDENT UNION BUILDING

Architect Jess T. Jones of Long Beach has completed plans for a concrete and steel Student Union Building for the San Bernardino Valley College at San Bernardino.

Included in the building will be a dining hall, lounge, fountain room, store, kitchen, toilets; composition and tile roofing, concrete asphalt tile and wood block flooring, aluminum sash, air conditioning, full basement, stone veneer, glass partitions, plumbing and electrical work.

SCHOOL BONDS APPROVED

Voters of the Mt. Diablo Unified School District of Concord, Contra Costa County, recently approved issuance of $2,100,000 in School Bonds, with funds to be used in the construction of a new Ambrose High School and new Elementary School Buildings in the City of Concord.

A State Aid grant of $2,500,000 will also be used in the new project.

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DALLAS, TEXAS SHOPPING CENTER

Plans for the construction of the Oak Cliff Center in Dallas, Texas, have been announced by A. Harris & Co. of Dallas.

The development covers 30 acres and consists of a 3 story department store, super market, drug store, large specialty store, variety store, hardware store, furniture store, restaurant and various shops. Parking for 3500 automobiles is included.

Construction is of reinforced concrete, fieldstone, texture concrete and glass, elevators, escalators, air conditioning, covered walkways, underground tunnel for truck deliveries, and the estimated cost is $5,000,000.

Welton Becket & Associates, Los Angeles, are the architects.

HIGH SCHOOL GYMNASIUM FOR HENDERSON, NEVADA

Plans are underway by the Las Vegas Union School District to build a new gymnasium building for the Basic High School at Henderson, Nevada.

The architectural and engineering firm of Miller-Haynes-Smith, Inc., of Henderson is preparing plans and specifications.

Estimated cost of the work is $350,000.

ANNUAL DAVIS FARM STRUCTURES CONFAB

The fifth annual Farm Structures Conference will be observed on February 1st at Davis campus of the University of California.

The program includes subjects dealing with building materials, structures, and improvements in methods and equipment.

Loren W. Neubauer, Associate Professor of Agricultural Engineering at Davis, will be chairman of the conference, which is open to the public.

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PERSONALITIES

JOHN CARL WARNECKE,
Architect, A.I.A.

San Francisco, California

A broad, general practice of architecture, representing a well-rounded versatility and bringing about closer, more fruitful cooperation between architect and community, characterize the work of John Carl Warnecke, A.I.A., Architect, of San Francisco and Oakland.

JOHN CARL WARNECKE
AIA, ARCHITECT

Warnecke, a prominent second-generation architect (his father is Carl I. Warnecke, A.I.A., of Oakland) has brought new lustre to an established, solid practice of architecture; he has developed this practice along the lines of a strong regional approach to architecture. He is a native of Oakland, was educated in its public schools, attended Stanford University, receiving the A.B. degree in 1941 after an active college career, which included playing football on Stanford's Rose Bowl team of 1940. Taking post-graduate work in architecture at Harvard, he received the degree of Bach. of Architecture, returned to the Bay Area to round out a practical knowledge of building and architecture in various architectural offices, with a year in the field as supervisor of war housing projects for the Housing Authority of the City of Richmond.

While continuing to work in association with his father, Warnecke opened an office in San Francisco five years ago and is encircling the Bay Area with a variety of creditable work, much in the school field. This ranges from kindergarten level to junior college and graduate school design. Each type of design problem has its own approach: Mira Vista Elementary School in El Cerrito, White Oaks Elementary School annex in San Carlos, are Bay Area designs using natural materials, low lines and other general characteristics of a Bay Area approach. Portola Junior High School, El Cerrito, and Burbank Junior High School, Berkeley, utilize concrete, brick, glass and glass block in an equally direct approach to their needs, their size and their site. Warnecke has also designed the tile roofed, open-to-the-outdoors library in the public square at Hayward, several distinctive homes, stores, apartment houses, United States Government installations and at the present time is designing a community center, a proposed hotel on the Monterey peninsula, has a leading role in design of Oakland's new Municipal Airport Administration Building and is architect for the new campus of Golden Gate Baptist Theological Seminary in Marin County.

The Warnecke office has an available staff of twenty-five; including a staff planning consultant and research associate. It is highly diversified and Warnecke displays a natural ability to draw both men and ideas into creative focus. He believes in learning all there is to know about a client or a community's problems, putting it in writing, analyzing it, and giving the client full advantage of experience gained in a wide variety of work. This policy accounts for his frequent participation in school planning conferences at Stanford University and elsewhere, his privately published research reports on special projects such as the design for the new De Anza community high school at El Sobrante, and published articles on architectural problems. Because of this vitality and variety, an architecture which is regional in scope has in the space of a few years received both local and national honors and aroused interest in general and professional publications abroad as well as in this country.

NEXT MONTH: Robert Hogan, President, Woodwork Institute of California.

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PRODUCERS COUNCIL

(From Page 30)

give you some of our future plans and ideas. Since July The Producers' Council functions have been attended by more than eleven hundred guests and one hundred and forty members of The Council. These functions included four Informational Meetings and three Special Meetings put on by our various member companies. We have extended our activities to wider area by holding one of these meetings in Sacramento and one in the East Bay

area. One of our important projects of the coming year is to increase this coverage even more and make our contacts broader.

Our programs, we believe, have been excellent this year—largely due to the effort of our Program Committee Chairman Ted Bakeman; and Phil Brown, who reviews each program before it is presented to our guests. We have tried to develop a sound, basic structure for Informational Meetings, which we hope to follow for the remainder of this year. Briefly we believe that these meetings should be of the panel type with several member companies contributing their knowledge to one basic subject. This will not only give the architect and engineer broader information on the various products, but will give our member companies a greater opportunity to participate.

We have also extended our activities in other fields. Early last summer our Chapter sent to all AIA Chapters in Northern California, to Architectural Clubs in Fresno, Sacramento, and San Francisco, a brochure listing all Informational Programs, including movies that are available from our member companies. These programs are available for these organizations' use at any time provided we are given sufficient notice. This bulletin was prepared under the supervision of Al West, our past President, with the help of Herb Duncan. Phil Brown, present Chairman of our Educational Committee, has been following up very closely in an effort to make certain that this material is frequently used. Several programs offered in this bulletin have been seen by various organizations and we expect even greater interest this coming year. You may contact Phil Brown at Otis Elevator, San Francisco, if you are interested in obtaining further information on this.

We have taken in four new members since July. They are the Tricosal Company; Moody, Sweazy & Rowe; Kyle Prefab Steel Company; and Durand Door & Supply Company. We are now second only to New York and Chicago nationally in the total number of members. This is a fine record and much credit for this again goes to Al West. We want to continue our growth but on a very selective basis—we do not want members who will not take an active part in all Producers' Council functions.

In the coming year we hope to bring several more committees into active being. Our Publicity Committee, under Stan Basterash has already made strides this year, some of which you will

(See Page 35)

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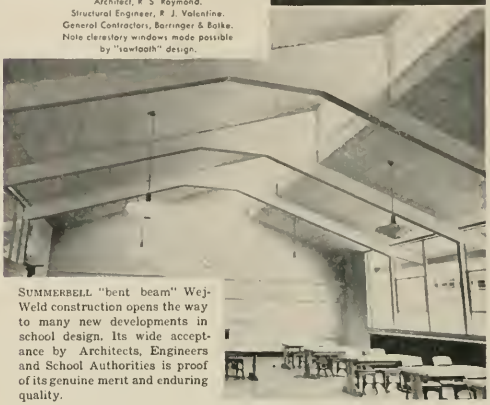
Summerbell for SCHOOLS

Elementary School, Santa Paula, California. Architect, R. S. Raymond. Structural Engineer, R. J. Valentine. General Contractors, Barringer & Baike. Note clerestory windows made possible by "sawtooth" design.



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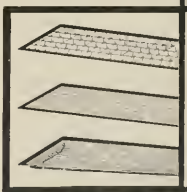

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(From Page 25)

TYPICAL "WESTERN" ARCHITECTURE

Is the new Hotel Los Altos, with its distinctive "lounge," coffee shop, and general utility area including a roof deck.

keeps concrete from adhering to concrete and started pouring the wall panels. There were 44 wall panels in all. Concrete for them, as well as for the whole Sylvania project, was supplied by the peninsula's Carl E. Anderson company.

Cardarelli let the wall panels cure for 10 days. Then truck cranes wheeled along side, gingerly poked their booms between the eight by eight roof supports. Workers attached lines to the panel and gave the take-it-away signal (but added take it easy under their breath). Each panel weighed 12

GENERAL SITE PLAN

tons, was six inches thick, and measured 20-by-21 feet. Each had to be first tilted, then literally snaked out backwards between the roof supports, which were spaced substantially less than a panel-width apart. All in all it was quite a feat . . . took only an average of 13 minutes to pick up, slide out and tilt up each panel. Moore officials say this version of the tilt-up technique expedites job-time substantially.

PRODUCERS COUNCIL

(From Page 33)

note in future issues of this publication, and this committee has plans for extending its activities further with the local newspapers and work in closer cooperation with the AIA Chapter. Our Informational Committee, under Pete Christensen, is working on a program devoted to the analysis and judging of product literature, which should be valuable to all of us.

We have some excellent programs planned for the next few months—among them the "Traveling Caravan" of building materials, which will be shown at the Mark Hopkins on April 28. This is a display that will travel the entire country and consists of outstanding exhibits of the quality products of our member companies.

In summation we have had a successful year so far, we believe, and credit for our success should go largely to the Committee Chairmen, the Vice President, the Treasurer, and the Secretary, whose names appear at the top of this article. Their hard work and advice have been invaluable. We hope to extend our activities even further in the coming months and the basic philosophy that we will try to follow is to seek closer cooperation with the architects and engineers in this area, endeavoring always to devise new and better ways of disseminating reliable and accurate information about the products of our members—for this was the reason the American Institute of Architects originally suggested that The Producers' Council be organized and affiliated with them. Any small step in that direction and we will feel that our efforts have not been wasted.

Roland S. MacNichol, President
Northern California Chapter

SUGGESTED CONTRACT FORM ISSUED AS GUIDE FOR ENGINEERING PROJECTS

The American Society of Civil Engineers and The Associated General Contractors of America have announced the publication of a suggested contract form for use as a guide in preparing contracts for private engineering construction projects.

Drafted by the A.S.C.E.-A.G.C. Joint Cooperative Committee, the document replaces an older form that had been unchanged since 1925. Entitled "Suggested Form of Contract For Use in Connection With Engineering Construction Projects,"

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the form is not intended for building construction.

One of the primary aims of the Committee was to avoid confusing terms and to use language that could be clearly understood by engineers and contractors. Formulation of a suggested contract form was one of the first tasks the committee assigned itself upon its organization late in 1948. Completion of the document is regarded by the committee as one of its most important projects to date.

The material contained in the 15-page document pertains to (1) the contract agreement itself, covering the three alternative bases of payment to the contractor, i.e., lump sum, unit price and cost-plus, and (2) the general conditions of the contract.

Included in the contract agreement are articles covering the scope of the work; time of completion; the contract sum; progress payments; force account work, and acceptance and final payment.

The general conditions of the contract cover such items as definitions; execution, correlation and intent of documents; design, drawings and instructions; order of completion; contractor's understanding; materials, appliances, employees; superintendence; inspection of the work; owner's right to terminate contract; contractor's right to stop work or terminate contract; payments withheld prior to final acceptance of work; etc.

Present co-chairmen of the committee are: Gail A. Hathaway, office of Chief of Engineers, Department of the Army, Washington, D. C., for A.S.C.E., and Dwight W. Winkelman, D. W. Winkelman Co., Syracuse, N. Y., for A.G.C.

BAY AREA TRANSIT PLAN

(From Page 9)

should be located where it would intercept the many feeders to the eastward and connect more directly with the Posey Tube, a new tube in Webster Street, and a new freeway in Alameda. As a first step it is proposed that the Bay Bridge line be connected with the north and south trunk line to give direct through service between the business centers of Oakland and San Francisco, with a terminal coach yard north of the Estuary similar to that proposed for San Francisco at Twelfth and Market Streets. The line would be accessible to all railroad companies in Oakland for interchange or direct connections.

The surplus earnings of the Bay Bridge are now approximately $8,000,000 per year. This sum is enough to meet the interest and fixed charges of a large loan, a part of which could be used for financing construction of the initial mass transit system.

OPENS ARCHITECTURAL OFFICE

Miles Polis, Ed Sullam and Jim Stewart announce the opening of offices at 257 So. Spring Street, Los Angeles, for the general practice of architecture.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

REINFORCED BRICK MASONRY — Lateral Force Design. By Harry C. Plummer and John A. Blume. Structural Clay Products Institute, Washington, D. C. Price $4.95.

The authors have presented to the design profession and construction industry, in concise form, data on the performance of masonry, both reinforced and unreinforced, recommended design and construction procedures based upon these data, together with a review of currently accepted design criteria, particularly those relating to lateral forces resulting from wind, earthquake or blast.

The book is for the use of architects and engineers experienced in design construction, and is of value to undergraduates of architectural and engineering colleges, and to those embarking upon their professional careers.

Examples are given in the Appendix in which various design formulae are applied to specific problems, and design tables are included similar to those found in most handbooks. These latter are an aid to both the experienced engineer and the beginner.

The authors are both outstanding in their professional field: Harry C. Plummer is Director of Engineering and Technology, Structural Clay Products Institute, and John A. Blume is one of the West's leaders as a Consulting Structural Engineer.

DUNBAR BOOK OF MODERN FURNITURE. Dunbar Furniture Corp. of Indiana. Berne, Indiana. Price $1.00.

Written by Edward Wormley and containing many illustrations in black and white and in color, the book represents an age in furniture design—the present. It is intended to be useful as a guide for those to whom furnishing a home is a matter of importance and pride.

CLIMATE AND ARCHITECTURE. By Jeffrey Ellis Aronin. Reinhold Publishing Corp., 330 W. 42nd Street, New York 36. Price $12.50.

Through the centuries men have faced, and sometimes solved, the problem of designing buildings that are in harmony with the climate and in this book, for the first time, Author Aronin describes in full all of the elements of climate, acquainting the reader with the limitations imposed by the climate.

Included are a number of pertinent and most helpful charts and graphs from widely scattered sources, augmented with findings of the author's own investigations in the field. Described in full detail is the physics of the influences of the sun, temperature, wind, precipitation, lightning, and humidity upon architecture as well as their beneficial and disadvantageous effects under given conditions, their control through the orientation of buildings, site and town planning, and the use of such devices as brise-soleil, trees, windbreaks, and snow fences.

The result is a well planned book of 55 tables and more than 300 illustrations.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

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Blowing machine. Now available new catalog describing the Universal Uni-Matic insulation blowing machine. Gives in detail important features of the machine, as well as the Universal Metered Feed System and "Twin-Shaft" Shredder; blower eliminates 30% of man-hour operating cost; saves one out of every 4 bags of material by averaging over 25% greater cover-

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CATALOGUES — Available

age. For copy of this new bulletin, write DEPT-A&E, Universal Insulating Co., Van Wert, Ohio.

Pedestal tool grinders. A new South Bend lathe catalog (5328) describes the recently introduced 8" and 10" South Bend Pedestal Tool Grinders as modern machines functionally designed for better and easier off-hand grinding; one special feature of new product is knuckle room to spare, as there is no motor between grinding wheels. Printed in color, folder illustrates the chief design improvements; interior-mounted and protected motor, wheel weight taken off motor bearings, large eye shields with built-in lighting, and many other precision features for better, faster, easier, safer grinding.

For full information write DEPT-A&E, South Bend Lathe, South Bend 22, Indiana.

Water systems. A new water systems catalog, designed to double as a strong selling tool, expanded into 102 pages and divided into 12 easy reference sections, has just been published by Gould Pumps Inc. A section features tankless units, packaged units, deep well systems, jet-o-matics; another section features pump selection, with data in helpful table form; many illustrations. For free copy write DEPT-A&E, Gould Pumps Inc., Seneca Falls, New York.

Metal roofing. Two new pamphlets on Follansbee Steel Roofing, Valleys and Weathersealing (A.I.A.-12-C-1), and Follansbee Terne Metal roofing (A.I.A.-12-C-1) have just been issued and are now ready for distribution to architects, engineers, contractors and others interested in the construction industry; gives detailed description of the physical properties, design, characteristics and user-benefits; also such essential information as composition of the metal, thickness, terne-alloy coating, mill finish, dimensions, weight, coefficient of expansion and other features including tensile strength and fire resistance qualities; line drawings are used to illustrate ten applications; technical information and typical specifications. For free copy write DEPT-A&E, Follansbee Steel Corpn, Pittsburgh 30, Pa.

Gas heaters. A twelve-page technical bulletin, describing the complete line of Series 23A gas-fired unit heaters has just been published by the United States Air Conditioning Corpn. The line includes propeller fan and blower type heaters, each produced in fourteen models, ranging in capacity from 55,000 to 500,000 B.T.U. per hour and burning all types of gas at the rated capacities. Booklet is two-colored, includes capacity tables and roughing-in dimensions, as well as structural and operational descriptions. Copy available by writing DEPT-A&E, United States Air Conditioning Corpn, 33rd & Como Ave., S. E. Minneapolis 14, Minn.

Light weight pipe. As a practical help to pipe users, Naylor Pipe Company has just issued a new bulletin (No. 507) showing typical applications of its light-weight lockseam-spiralweld pipe and fittings. Included in the new publication are standard specifications on pipe from 4" to 30" in diameter, together with data on fabricated fittings, flanges, and connections to meet all pipe line requirements. Copies are available to architects, engineers and contractors by writing DEPT-A&E, Naylor Pipe Company, 1230 East 92nd Street, Chicago 19, Ill.

Basements. Basements should be planned and constructed as carefully as the rest of the structure, and an 8-page bulletin just released by the University of Illinois Small Homes Council tells how this may be accomplished. New publication gives pointers for constructing basements so they are well built, light, dry, and useful; includes suggestions for living activities, adequate daylighting, ventilating, moisture control and warmth. The bulletin presents a table of recommendations for construction under various conditions; describes necessary wall and floor construction, water-proofing, drainage; how to repair leaks, and what to do about faulty drainage. Copies are available by writing DEPT-A&E, Small Homes Council, Mumford House, University of Illinois, Urbana, Ill.

Glass blocks. For industrial, commercial and public buildings. New booklet (A.I.A. File No. 10-F) just published by Pittsburgh Corning Corpn. gives full information on insulating value, light transmitting properties, typical installations, functional block selection, toplighting blocks, decorative patterns, daylighting performance data, physical performance data, panel lay-out table, modular coordination, curved panel radii, suggested details; how to install, accessories, materials, specifications. Many drawings, photographs of actual installations and uses, charts and tables on technical data. For free copy write DEPT-A&E, Pittsburgh Corning Corpn, 1 Gateway Center, Pittsburgh 22, Pa.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	35 per 100 ft.

Sash weights, cast iron, $100.00 ton.

1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$12.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00

Sand—

Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—

Common (all brands, paper sacks),
Per Sack, small quantity (paper) $1.05
Carload lots, in bulk, per bbl.) 3.55
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount 2% on L.C.L.

Trinity White, Medusa White { 1 to 100 sacks, $3.50 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 4-yd. loads:

Per cubic yard, 1-8 Mix	$ 9.80
1-7 Mix	10.15
1-6 Mix	10.70
1-5 Mix	11.40
Curing Compound, clear, drums, per gal.	1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .19	$ .19
6x8x16-inches, each	.23	.235
8x8x16-inches, each	.27	.27
12x8x16-inches, each	.38	.40
12x8x24-inches, each		.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).
Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	25/32x2¼	½x2	⅜x2	⅝x2
	$	$	$	$
Clear Otd., White	$425	$405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381.00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390.00
33/32 x 2¼ 2nd Grade	365.00
33/32 x 2¼ 2nd & Btr. Grade	375.00
33/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
32 in Heat Absorbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capecity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3¾") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides..... $29.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plaster ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m.. ..... $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m..... 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring..	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry ..... 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 219.00
¾-inch, per M sq. ft..... 292.00
Plyscord ..... 11½c per ft.
Plyform ..... 25c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds..... $43.50
Standard Ribbed, ditto..... $47.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums	per gal. $1.65
5-gallon cans	per gal. 1.76
1-gallon cans	each 1.88
Quart cans	each .54
Pint cans	each .31
½-pint cans	each .20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery)· ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$.	$.
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster.	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists.....	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply.....$13.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square.....$18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square..... 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square..... 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top..... $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M..... $240.00
Standard, 8-in. per M..... 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft..... $1.25
Vented hip skylights, per sq. ft..... 2.25
Aluminum, puttyless, (unglazed), per sq. ft..... 1.25
(installed and glazed), per sq. ft... 1.85

STEEL—STRUCTURAL—

$290 per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10
1 ton to 5 tons, deduct 25c.	*

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.20 to $1.60 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.35 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $1.65 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" .. $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored	
12 x 12, each.....	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 5: 525 Market St., SU 1-6747
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 5: 525 Market St., SU 1-6747
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 522 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
W. P. FULLER CO.
Seattle, Tacoma, Portland
NICOLAI DOOR SALES CO.
San Francisco: 3045 19th St.
F. M. COBB CO.
Los Angeles & San Diego
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
HOUSTON SASH & DOOR
Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St. FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 5: 525 Market St., SU 1-6747
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(96)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(13)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: NIles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
frusses
Tacoma, Wash.
WYERNAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 333 Montgomery St., DO 2-3883
Los Angeles 13: 601 West Fifth St., MI 6294

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT & HILP
San Francisco: 918 Harrison St., DO 2-0700
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES
(ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

EMPLOYMENT BLDG., Eureka, Humbolt county. California Dept. Public Works, Sacramento, owner. New office building for the Department of Employment, concrete floors and footings, wood siding, wood framing, and wood trusses for walls and roof; plaster and plasterboard interior walls and ceilings, aluminum sash, wood and hollow metal doors and frames, acoustic tile, composition roofing, flagpole, black-top paving, plumbing, heating and ventilating, $134,900. GENERAL CONTRACTOR: Bishop-Younger-Bradley Co., San Francisco.

RESTAURANT, Panorama City, Los Angeles county. Phil Ahn, Panorama City, owner. One-story, brick and frame stucco; 2800 sq. ft. floor space; composition roofing, tapered steel girders, metal sash, concrete block, concrete slab, terrazzo, glass and glazing, acoustical tile, cork refrigeration, plaster, electrical work, plumbing, heating and ventilating, toilet partitions, fiberglass insulation, painting, asphalt tile, finish hardware. ARCHITECT: Armet & Davis, Los Angeles. CONTRACTOR: Pallisgaard-Wilson, Los Angeles.

CHANCERY BUILDING, Fresno, Fresno county. Roman Catholic Diocese, Fresno, owner. One-story reinforced concrete — $127,000. ARCHITECT: Vincent Buckley, San Francisco. GENERAL CONTRACTOR: Long & Needham, Fresno.

JUNIOR HIGH ADD'N, Paso Robles, San Luis Obispo county. Paso Robles Union High School District, Paso Robles, owner. Frame and stucco, some structural steel, metal sash, acoustical ceilings, asbestos tile floors—$174,384. ARCHITECT: Daniel, Mann, Johnson & Mendenhall, Los Angeles. GENERAL CONTRACTOR: C. C. Sharpe, Arroya Grande.

COUNTY OFFICE BUILDING, Santa Maria, Santa Barbara county. Santa Barbara County Board of Supervisors, Santa Barbara, owner. Three connecting buildings of frame and stucco; excavating, asphalt paving, concrete and masonry work, structural steel, sheet metal, composition and tile roofing, plastering, metal windows, glass and glazing, acoustical and insulation, ceramic tile, resilient floor covering, metal toilet partitions, plumbing, electrical, heating and ventilating, folding partitions, venetian blinds — $354,748. ARCHITECT: Daniel, Mann, Johnson & Mendenhall, Los Angeles. CONTRACTOR: J. W. Bailey Construction Co., Santa Barbara.

SHOWERS & LOCKERS. Sonoma High School, Sonoma county. Sonoma Valley Union High School District, Sonoma, owner. Frame and stucco addition to present high school to serve as shower and locker building—$129,154. ARCHITECT: John Lyon Reid,

San Francisco. GENERAL CONTRACTOR: Jacks & Irvine, San Francisco.

SHOPPING CENTER, Saratoga, Santa Clara county. A. Dempsey, c/o architect, owner. One-story reinforced concrete and frame building to be occupied by a group of stores — $74,500. ARCHITECT: Kurt Gross, San Jose. GENERAL CONTRACTOR: Geo. J. Lauer, San Jose.

RED CROSS BLDG. San Bernardino, San Bernardino Chapter American National Red Cross, San Bernardino, owner. Two-story reinforced brick, 10,000 sq. ft., built-up roofing, slab and asphalt tile floors, air conditioning, acoustical ceilings, plate glass, indirect lighting, metal sash, brick planters, off-street parking — $[illegible],343 ARCHITECT: William F. Mellin, San Bernardino. GENERAL CONTRACTOR: J. Putnam Henck, Skyforest.

SEWAGE TREATMENT, Sparks, Nevada. City of Sparks, Sparks, Nevada, owner. Addition to the city's sewage treatment plant and sewers, reinforced concrete construction — $444,895. ENGINEER Clyde C. Kennedy, San Francisco. GENERAL CONTRACTOR: G. E. Schilling Engineering & Construction Co, Reno.

ELEMENTARY SCHOOL, Bakersfield, Kern county. Bakersfield City School District, Bakersfield, owner. New Williams Elementary School, 333,275 sq. ft., frame and stucco construction, composition roof, concrete and asphalt tile floors, forced hot water heat, insulation, steel sash, ceramic tile, workboards and tackboards, 17-classrooms, multipurpose room, toilet facilities and administration unit. $443,780. ARCHITECT: C. B. Alford and W. J. Thomas, Associate, Bakersfield. GENERAL CONTRACTOR: L. H. Hansen and Son, Fresno.

PARKING GARAGE, San Francisco. Downtown Center Corpn, San Francisco, owner. Nine-story and basement: 417,000 sq. ft., 1000 car capacity, reinforced concrete construction, circular ramp, 2-auto elevators — $2,250,000. ARCHITECT: Geo. A. Applegarth, San Francisco. STRUCTURAL ENGI-

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	3.00	3.00	3.00	3.00	3.00
REINF. STREET	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.95	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.175	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

* 6 Hour Day. ** 7 Hour Day. *** Before C.I.S.C for 15c increase.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

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COLLECTIONS—Thoroughly experienced in all phases of the collection business; your interests protected at all times; bonded agents everywhere; no collection no charge; California Material Dealers Service Co., 925 Hearst Bldg., San Francisco. Ernest T. Langley, Manager.

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REGISTERED ARCHITECT, residential and commercial, 18 years experience, seeks association with medium sized firm. Independent work, design, specifications, supervision, client contact. Write BOX SF, Architect & Engineer, 68 Post Street San Francisco, California.

HOME BUYERS — Now building moderate priced homes in Sacramento and Marysville area; we are in a position to serve your needs. "Better Built Homes" by Ronne, Ronne & Ronne, Builders, 520 9th Street, Sacramento.

NEER: Ellison & King, San Francisco. GENERAL CONTRACTOR: Cahill Construction Co., San Francisco.

OFFICE BUILDING, Phoenix, Arizona. Arizona Power Authority, Phoenix, owner. One-story offices, conference room, coffee bar, masonry construction; 74 x 86 ft, built-up roof, concrete and asphalt tile floors, air conditioning, plastering, steel sash, and insulation — $95,960. ARCHITECT: H. H. Green, Phoenix. GENERAL CONTRACTOR: Mardian Construction Co., Phoenix.

SCHOOL & LIVING QUARTERS Navajo Indian Reservation, Arizona. Housing & Home Finance Agency, Phoenix, Arizona, owner. Elementary school and living quarters on the Navajo Indian Reservation near Ganado, Arizona—$820,750. ARCHITECT: Kemper Goodwin, Tempe, Arizona. GENERAL CONTRACTOR: M. M. Sundt Construction Company, Tucson, Arizona.

HIGH SCHOOL ADD'N, Tulare. Tulare Union High School District, Tulare, owner. Steel frame and frame and stucco construction; cafeteria, kitchen, science, academic, 11-classrooms, toilets — $301,921. ARCHITECT: Robert C. Kaestner, Visalia. GENERAL CONTRACTOR: L. H. Hansen & Sons, Fresno.

CHURCH, Lancaster, Los Angeles county. Methodist Church of Lancaster, owner. Concrete block building, composition roofing, concrete slab with asphalt tile, steel sash, air conditioning, plastering, electrical work — $99,300. ARCHITECT: Frick and Frick, Pasadena. GENERAL CONTRACTOR: Gordon Davidson, North Hollywood.

MICRO-WAVE LABORATORY, Stanford University Campus, Santa Clara county. Stanford University, Palo Alto, owner. One-story, reinforced concrete and concrete block construction—$179,300. ARCHITECT: Ambrose & Spencer, San Francisco. GENERAL CONTRACTOR: Vance M. Brown & Son, Palo Alto.

GOLF CLUBHOUSE, Haggin Oaks Golf Club, Sacramento, owner. One-story, concrete block and frame clubhouse building —$70,470. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Geo. W. Reed, Sacramento.

MASTIC ELEM SCHOOL ADD'N, Alameda. Alameda Board of Education, Alameda, owner. One-story, reinforced concrete and frame construction; 4-classrooms and toilet rooms—$103,045. ARCHITECT: Kent & Hass, San Francisco. GENERAL CONTRACTOR: Indenco, Oakland.

ELEMENTARY SCHOOL, Lovelock, Nevada. Lovelock Elementary School District, Lovelock, owner. One-story, concrete block and frame construction, some structural steel; multi-purpose rooms, administration, kitchen and toilet rooms—$218,500. ARCHITECT: Ferris & Erskine, Reno, Nevada. GENERAL CONTRACTOR: Bishop, Younger & Bradley, San Francisco.

CONVENT, Santa Monicas Parish, Willows. Roman Catholic Diocese of Sacramento (Calif.), owner. Two-story frame and stucco construction—$50,000. ARCHITECT: Chas. F. Dean, Sacramento. GENERAL CONTRACTOR: Riverman & Sons, Portland, Oregon.

PACOIMA JUNIOR HIGH, Pacoima, Los Angeles county. Los Angeles Board of Education, Los Angeles, owner. Twenty-one classrooms, administration, health counseling unit, two mathematics rooms, 2-socia. studies rooms, two typing rooms, 3-science rooms, 2-clothing, 2-foods, all purpose, art, artcraft, ceramics, 5-shops, 2-choral music, instrumental music, oral arts, library, agriculture, 850 seat auditorium, physical education and gymnasium, multi-purpose and cafeteria, student store; composition roofing, concrete and wood floors, asphalt tile floor covering, acoustical work, metal sash, heating and ventilating, structural steel, ornamental iron, sheet metal—$1,951,916. ARCHITECT: Wm. Glenn Balch and L. L. Bryan, Los Angeles. GENERAL CONTRACTOR: Zoss Construction Co., Los Angeles.

HOTEL BLDG, San Pedro. San Pedro Community Hotel, Inc, San Pedro, owner. One-story; 80-rooms, kitchen, dining room and meeting rooms; frame and stucco construction, steel frame in central core, composition roofiing, cement slab and asphalt tile floors, forced air heating, masonry work, louvered glass windows, electrical work. ARCHITECT: Richard Neutra and Robert E. Alexander, Los Angeles. GENERAL CONTRACTOR: Crowell-Wilson Company, Los Angeles.

TWO ELEMENTARY SCHOOLS, Turlock, Stanislaus county. Turlock Elementary School District, Turlock, owner. West-site school of 8-classrooms, administration and toilet rooms; East-site school of 4-classrooms, administration and toilet rooms; reinforced concrete poured walls and tilt-up wall, frame construction — $229,950. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Floyd G. Borchardt, Stockton.

DANCE HALL ADD'N, Los Angeles. Lester Gibson, Los Angeles, owner. Second floor addition to existing building for dance hall; 40x75 ft. in area, built-up composition roofing, wood sash, rigid steel frame bents, 1-wall concrete block 60 ft. long and 25 ft. high, pine and hardwood flooring, suspended blower type gas heater, toilet facilities. STRUCTURAL ENGINEER: W. M. Bostock, Huntington Park.

HIGH SCHOOL ADD'N, Orland, Glenn county. Orland Joint Union High School District, Orland, owner. Gymnasium (2) buildings and 3-homemaking units; reinforced concrete block construction, wood roof, and frame and stucco construction—$284,877. ARCHITECT: Lawrence G. Thomson, Chico. GENERAL CONTRACTOR: Hancock Construction Co, Lafayette.

HIGH SCHOOL ADD'N, Herlong, Lassen county. Housing & Home Finance Agency, San Francisco, owner. Structural steel frame and frame and stucco construction addition to present high school; multi-purpose, kitchen, shop building—$207,888. ARCHITECT: Robert C. Kaestner, Visalia. GENERAL CONTRACTOR: Alland & Company, Mt. View.

WAREHOUSE, Sacramento. L. J. Carr Co., Sacramento, owner. One-story, 60x180 ft. area, 2-24x100 loading docks; wood frame, corrugated aluminum sides and roof, truck high, reinforced concrete floors—$43,023. ARCHITECT: Franceschi & Mullen, Sacramento. GENERAL CONTRACTOR: Edwin J. Mackey, Sacramento.

NEWSPAPER PLANT, Santa Monica, Los Angeles county. Santa Monica Publishing Company, Santa Monica, owner. Two-story, and basement, reinforced concrete newspaper publishing plant; 100x150 ft. in area,

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composition roofing, reinforced concrete floors, asphalt tile, terrazzo and ceramic tile, structural steel, acoustic tile ceilings, interior plastering, plumbing, heating, electrical work—$400,000. ARCHITECT: Barienbrock & Murray, Santa Monica. GENERAL CONTRACTOR: Herbert Goldsworthy, Santa Monica.

PAROCHIAL SCHOOL, Culver City, Los Angeles county. Roman Catholic Archbishop of Los Angeles, Los Angeles, owner. Eight-room school, reinforced brick wall construction, composition roofing, slab and asphalt tile floors, acoustical work, plastering, tile toilets, gas heaters, metal sash, electrical work—$86,000. ARCHITECT: George Adams, Los Angeles. GENERAL CONTRACTOR: L. A. Lefevre & Sons, Inc, Tarzana.

IN THE NEWS

DEPARTMENT STORE ALTERATIONS

Architects Lescher & Mahoney of Phoenix, Arizona, are completing plans for the construction of additions and alterations to a 4-story department store for Korricks.

Two stories will be added to the existing 4 stories, and a 6-story annex will be built. Estimated cost of the work is $1,750,000.

PACKING PLANT ADDITION

Peter Whitehill, structural engineer, Los Angeles, is completing drawings for the construction of a 1-story and basement, reinforced concrete and brick addition to a packing plant in Vernon for the Ideal Meat Packing Company.

The building is 110x41 ft.; composition roof, concrete slab, structural steel, and other usual items.

DRIVE-IN RESTAURANT

Plans are underway for the construction of a new Drive-In restaurant in Los Angeles by Architect Harry Hillier of Beverly Hills.

The work will comprise concrete slab, composition roofing, veneer brick barbecue, glass louvres, air conditioning, toilets, asphalt paving and will include an area of 1500 sq. ft.

METHODIST CHURCH BUILDING

Architect John Replogle of Las Vegas, Nevada, is completing plans for the construction of a new church building in Las Vegas for the First Methadist Church.

The building will have a copper and composition roof, oak and asphalt tile floors, forced air heating, air conditioning, asphalt concrete paving and wood roof trusses.

Estimated cost is $200,000.

SCHOOL BONDS APPROVED

Voters of the Redlands Joint Union High School District have approved a proposal to issue and sell school bonds in the amount of $1,350,000 to finance construction and repairs to Redlands schools.

NEW CHURCH BUILDING

The Claremont Congregational Church (Calif.) recently announced plans for the construction of a new church building in Claremont, with plans and specifications being prepared by Architect Theodore Criley, Jr. of Claremont.

The building will comprise 2[illegible]x100 ft. in area and will be of reinforced concrete construction with tile roof, metal sash, terrazzo and hardwood floors, forced air ventilation, radiant hot water heating and asphalt tile floor covering.

ARCHITECT SELECTED

Architect John Bomberger of Modesto has been commissioned by the Rising Sun Joint School District of Vernalis (Stanislaus county, Calif.) to draw plans and specifications for the construction of an addition to the Elementary School building in Vernalis.

The work will include 4 classrooms, multipurpose rooms, kitchen and toilet rooms.

FEDERAL RESERVE BANK ADDITION

The Federal Reserve Bank of San Francisco recently announced construction of an addition and alterations to the Federal Reserve Bank of Salt Lake City will be undertaken in the immediate future, at an estimated cost of $1,500,000.

The work will include a sub-basement, security court with parking deck on top for armored cars.

The firm of Ashton, Evans & Brazier, Salt Lake City, are the architects.

ARCHITECT DESIGNS GLENDALE RESIDENCE

Architect Raymond Jones of Glendale has been commissioned to design a 6-room stucco and wood dwelling in Glendale.

The home will contain 1700 sq. ft.; composition roofing, concrete slab floor, aluminum basement[illegible] metal and glass sliding doors; fireplaces and barbeque, forced air heating, two baths and stall shower, and attached garage.

SCHOOL BONDS ARE APPROVED

Voters of the Point Reyes Elementary School District recently approved issuance of $128,000 in special school bonds for the construction of a new Elementary School building in Pt. Reyes.

OFFICE BUILDING FOR LAS VEGAS

Las Vegas, Nevada, will soon have a new office building, according to a recent announcement by Leavitt Bros. of that City.

Architect Ray W. Baldwin of Las Vegas is completing plans for the construction of

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a 2-story building which will contain 19 offices and 7 stores. The building will be of concrete and concrete block; built-up roof, hot water heat, refrigeration, and concrete paving. Estimated cost is $85,000.

SCHOOL BONDS APPROVED

Voters of the Campbell Union High School District, Santa Clara county, recently approved the issuance of $2,000,000 in school bonds for the purpose of building a new High School Building in the city of Campbell.

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MANUFACTURING PLANT

Roy M. Watkins & Associates, Newport Beach, have prepared plans for a tilt-up concrete wall office and shop area building to be erected in Costa Mesa for the Tapmatic Precision Tool Company.

The building will contain 6000 sq. ft. and will cost an estimated $35,000.

ARCHITECTURAL FIRM EXPANDS FACILITIES

Adrian Wilson and Associates, Los Angeles, architects and engineers, recently announced expansion of their offices in Los Angeles, Nagoya and Tokio, and plans for opening of additional offices in the Far East, where the firm is currently engaged in work for the Air Force and the Japanese Air Defense Force.

The work includes installations for troop housing, operational areas, supply and maintenance buildings, vehicle maintenance buildings, communications and radio, aircraft parking apron, taxiways and parking revetments and cold storage warehouses.

GENERAL MOTORS BUYS NEW SITE

Announcement has been made of the purchase of land in Alameda county, near the City of San Leandro, by General Motors Corpn, for the site of a General Motors Training Center.

Work will consist of a shop, classrooms, auditorium, conference rooms, cafeteria and kitchens.

SCHOOL BONDS APPROVED

Voters of the Gridley Elementary School District, Gridley, Calif., recently approved issuance of $350,000 in special bonds with funds to be used for the construction of a new Elementary School Building.

The new school building will include administration and class rooms, toilets and other educational facilities.

CITY TO BUILD RECREATION CENTER

Architect Richard Bledsoe of Las Vegas, Nevada, has been commissioned by the City Board of Commissioners to draft plans and specifications for the construction of a new Recreation Center to be built in the City of Las Vegas.

The work includes a gymnasium, swimming pool, and new teen-age recreational facilities. Estimated cost is $500,000.

ADDITION TO HOSPITAL

The Lompoc Community Hospital, Lompoc, Calif., recently announced plans for the construction of an addition to the Hospital at a cost of $25,000. R. W. Cheeseman of Santa Barbara is the architect.

WEST COAST FIRM APPOINTED

The Pacific Engineering Equipment Co. of Los Angeles has been appointed representative of the Marlo Coil Co. of St. Louis, manufacturer of air conditioning and heat transfer equipment.

Lewis H. Dietz, president of Pacific Engineering, is the originator of the flow control system of hot water heating. Offices of the firm are maintained in Los Angeles, San Francisco, and a warehouse in North Hollywood.

BEN LEVENGER APPOINTED

Ben Levenger has recently been appointed manager of Marketing for the Schlage

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CORDAGE COMPANY WILL BUILD UNIT

The Great Western Cordage Co. of Orange will soon construct a tilt-wall concrete building as a new unit of the plant in California.

The work will include three large factory rooms, and a suite of offices. Parking will be provided on an area adjacent to the building. Estimated cost is $86,000.

ARCHITECT SELECTED

Architects Birge M. Clark and Walter Stromquist of Palo Alto have been selected by the Palo Alto Unified School District to prepare plans and specifications for the construction of a new Senior High School to be built in Palo Alto.

ALASKA DEFENSE CONSTRUCTION

Approximately $550 million in military defense construction has been turned over to the Army and Air Force by the Alaska District Corps of Engineers since the Alaska District was established in 1946.

In reviewing accomplishments of the Alaska Corps, Col. L. H. Foote, District Engineer, pointed out there was an estimated $238 million in defense projects remaining to be built under the Alaska Defense construction program.

SITE OBTAINED FOR MODEL CITY

The Preston Management Company and the Utah Construction Company have acquired the old Moraga Ranch of 5,000 acres in Contra Costa County and adjacent to Oakland, at a cost of $4,000,000, and will develop it into a model city with complete accomodations for some 28,000 people.

Construction, which is scheduled to start immediately, will include a modern shopping center, apartment houses, individual residences, schools, churches, and other essential buildings, with an estimated total construction cost of $50,000,000.

NAMED PRESIDENT OF BUILDERS COUNCIL

K. Sande Senness, Los Angeles builder-developer, was reelected president of the Home Builders Council of California recently.

He is also president of the Home Builders Institute of Los Angeles, a county-wide association of large scale community builders.

Headquarters of the Council is in Oakland.

ARCHITECT SELECTED

The architectural firm of Hertzka & Knowles of San Francisco has been commissioned by the Housing Authority for the City and County of San Francisco to design and draft specifications for construction of the new $2,500,000 Double Rock low rent Housing Project.

The project will comprise 350 units.

SANDBLASTING FIRM MOVES TO NEW SITE

Jack E. Smith recently announced the removal and opening of new facilities for the Smith Industrial Supply Company at 395 Irwin Street in San Francisco.

The firm deals in sandblasting equipment and painters equipment.

AIRPORT EXPERT JOINS ARCHITECTS

H. Arthur Hook, engineer and administrator, affiliated with the Civil Aeronautics Administration for the past 25 years, has joined the firm of Pereira & Luckman of Los Angeles, architects-engineers, as chief of its airport installation department.

Prior to assuming his new position Hook was chief of the airports division for the CAA in the 11 Western States, and responsible for all airport activities of that agency in this area.

FEDERAL FUNDS ARE RELEASED

The Corps of Engineers, U. S. Army, Sacramento, California, office, recently announced some $1,520,000 had been released for improvement of air training fa-

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cilities at the Mather Air Force Base, located near Sacramento.

At the same time it was announced $772,000 would become available for improvements at the Sierra Ordnance Depot, Herlong, California; $1,439,000 for improvement of Strategic Air Command facilities at the Castle Air Force Base near Merced; and $4,360,000 for construction of added facilities at the Treasure Island Naval Station on San Francisco Bay.

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LIBRARY BUILDING FOR STOCKTON

Plans for the construction of a new $1,465,000 Library Building in the City of Stockton are nearing completion in the offices of Peter Sala, architect.

The new building, which is to be located on Oak Street, will be of reinforced concrete construction and will contain some 80,000 sq. ft. of space.

BAKERSFIELD CITY HALL

Plans are underway for the construction of a new City Hall in the City of Bakersfield, with architect Robert N. Eddy preparing preliminary plans.

The proposed 2 story, plus basement, building will contain 40,000 sq. ft. and will cost an estimated $700,000.

APARTMENT BUILDINGS

Structural Engineers Wilsey & Co. of Burlingame are designing a 2 story Apartment building to be built in the City of San Mateo at an estimated cost of $350,000.

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5 The C.V. unit is then set in place. Excess of mortar will be forced out of joints from the back, leaving a ¾ inch mortar bed.

6 It takes the mason only a few seconds to position the C.V. unit and check it with a level. This insures a true wall plane.

7 He then taps the unit with a rubber mallet to fill all voids, forcing the excess mortar out of joints. Spacers are removed after initial set.

8 Face joints may be raked out and pointed with fine mortar. To complete the job, surface is washed with clean water.

*Ceramic Veneer

by Gladding, McBean

Los Angeles
Portland
Seattle
San Francisco
Tacoma
Spokane

Vol. 196 No. 2

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★

COVER PICTURE

PALO ALTO
CITY HALL

Associated Contruction
Consultants, Engineers

View of lobby, showing convex side of the free standing curved wall which defines the lobby and presents a striking appearance and is without latteral support of light ceiling structure above. For complete details and additional pictures see Page 10.

Photo by Phil Fern

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. EDITORIAL NOTES .

REDUCE TAXES

The annual review of the Federal Budget on a recent date revealed some very interesting facts and figures.

For example—the estimated deficit for the current Fiscal year, which ends June 30, 1954, is placed at $3.8-billion. This is $6.1-billion less than Truman's estimate made in January and $2.1-billion less than the May estimate made by the Joint Committee on Internal Revenue Taxation.

Revenues for the year are estimated at $68.3-billion, $400-million less than the January estimate and $700-million more than the figure released by the Joint Committee in May. The new figure includes some $800-million resulting from extension of the Excess Profits Tax, and also takes into account approximately 10% reduction in individual income taxes due in December, the expiration of the Excess Profits Tax on January 1, and the expiration of certain excise and corporation income tax increases at the end of March.

Expenditures for the Fiscal 1954 are estimated at $72.1-billion—$1.4-billion less than estimated in May, and $6.5-billion less than the Truman Budget. Substantial cuts were made in the fields of Defense, Foreign Aid and General Government Administration.

These figures surely indicate there can be an easing of the tax-bite on the public, and planned tax reductions should be made the first of the new year as promised.

* * *

Estimates are that this country could save a $-billion dollars annually by getting government out of competition with private enterprise.

* * *

VALUABLE PARKING SPACE

It is beginning to look as though downtown parking space is worth more than the automobiles it accommodates.

A recent survey by the Chamber of Commerce of the United States in eighteen cities, most of them under 100,000 population, shows the average value of a single parking space in terms of annual rental sales it produced was at least $20,000. This figure may be higher in the larger cities.

The value of individual parking spaces varied from about $10,000 in Newton, Massachusetts, to $64,000 in Modesto, California, owing to differences in retail sales totals, the use of streetcars and busses for shopping, and other factors.

But the survey is a striking illustration of the value of downtown parking spaces to retail merchants and to the city generally. To cite one example, Silver Spring, Maryland, population 75,000, has added 2,000 off-street parking spaces since 1945. During the same period, real estate values have increased more than fivefold.

In the larger metropolitan cities the land values would be much greater, so the problem grows as does the shopping area.

* * *

EDUCATION GROWING

Results of a recent national survey show that a far greater number of Americans are going to school—and going further in school—than ever before.

Today, according to U.S. Census Bureau figures, almost 25 per cent of our total population is now in the classrooms. A majority of Americans have had high school or college training. Less than ten years ago sixty per cent of our population over twenty five years of age, had less than a ninth grade education.

The report also shows that business is better where schools are better; that educational levels and earning powers are closely related.

Another obvious result of the steady growth of education is that the American people, as a whole, will henceforth be more politically articulate. Seventy per cent of today's 25-29 age group has attended high school or college; eighty per cent of the 14-17 age group is still in school—a sharp contrast to the ten per cent in 1900.

* * *

THANK YOU

THE BUREAU OF CHURCH BUILDING
300 - 4th Ave., New York City

January 16, 1954

Architect and Engineer, Inc.
68 Post Street
San Francisco 4, California

Gentlemen:

Congratulations on your December 1953 issue of "Architect and Engineer." I have visited many of the church edifices shown in your publication and number several of the architects concerned among my many friends in that noble profession.

Last Fall I was graciously entertained at church architectural conferences in Seattle, Oakland and Los Angeles. Subsequent correspondence received here expresses appreciation for our services and that of the Bureau.

More power to all of you out there who are trying to give a fresh expression in terms of contemporary design to the timeless faith which always lent inspiration and encouragement to architects and artisans and evoked from them the noblest works of art the world has ever known.

Sincerely,
C. Harry Atkinson

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LUMBER

whatever the job consider WOOD first

NEWS and COMMENT ON ART

SEATTLE ART MUSEUM

The Seattle, Washington, Art Museum is currently showing an exhibition of work by Keith Monaghan of Pullman, Washington.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, offers a diversified group of special exhibitions and events for February. Included are:

Exhibitions—The Anniversary Exhibition of The DeYoung Museum Society showing gifts through five years; Etchings, by A. Ray Burrell; Paintings and Drawings, by Rodger H. Bolomey; Sculpture, by George Lusk; "Illuminated Missal," 2 volumes, Nuremberg, 1507-1510, lent by Rush H. Kress and augmented by a collection of 16th Century German Graphic Art, from the Rosenwald Collection, National Gallery of Art; Ceramics, by Beatrice Wood; Watercolors, by William Fett; Paintings, by David Friend, and Paintings and Photographs, by Myra Albert Wiggins, a Retrospective Exhibition.

Special Events—Classes in Art Enjoyment for Adults; Seminars in the History of Art; Painting Workshop; and Classes in Art for Children which include Picture Making, Art and Nature and the Art Club.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, offers a variety of exhibitions and special events during the month.

Exhibitions — Jose Clemente Orozco Memorial Exhibition and An Introduction to Orozco; 73rd Annual Painting and Sculpture Exhibition of the San

(See Page 8)

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING

CIVIC CENTER

COLONY OF RED HOUSES

oil

14¼ x 12¼"

by

PAUL KLEE

Collection of the San Francisco Museum of Art.

COLORFUL CLAY BRICK

provides "that substantial look" for

H·J·HEINZ

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AT TRACY

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designing engineers · strobel & salzman
structural engineer · donald r. warren

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SAN JOSE BRICK AND TILE, LTD.
STOCKTON BRICK AND TILE COMPANY
UNITED MATERIALS & RICHMOND BRICK COMPANY

Inside or Outside A CLAY BRICK WALL · · · BEST FINISH OF ALL

(Continued from page 6)

Francisco Art Association; and Paintings on States and Territories, commissioned by the Container Corpn of America.

Special Events—A special lecture on the Orozco and Art In Mexico including films and slides by Grace L. McCann Morley, and a Preview of the 73rd Annual Painting and Sculpture Exhibition. Special Concerts each Wednesday evening; Lecture tours, Sunday afternoons; and Adventures in Drawing and Paintings, Art for the Layman and Children's Art Classes (Saturday morning).

PARK MERCED BRANCH—Will feature an exhibition of Presentation and Abstraction.

PHOTOGRAPHS AND PAINTINGS BY MYRA ALBERT WIGGINS EXHIBITED

A retrospective exhibition of Paintings and Photographs covering sixty-two years of productivity by Myra Albert Wiggins, often called the "Dean of Pacific Women Artists," is being shown at the M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco.

Included in the exhibit of paintings are examples of noted still-life studies in copper and brass, oil landscapes, florals and portraits. Photographs include Dutch scenes inspired by the work of old masters.

Although a great-grandmother, recently celebrating her 84th birthday, Myra Wiggins is active in painting and maintains a studio in Seattle, Washington. The exhibit will continue through March 7.

CALIFORNIA PALACE OF THE LEGION OF HONOR

Located in Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is presenting a February group of special attractions including the following:

Exhibitions—A showing of the Museum's recent acquisitions; Pink Lustre from the collection of Frederick C. Whitman; The Errand of the Eye, a group of photographs by Rose Mandel, and a selection of American Paintings from the Museum's Permanent Collections;

The Achenbach Foundation for Graphic Arts, at the Museum, offers Object of Decoration, a number of ornamental designs by early engravers; and a Loan Exhibition at the San Francisco Public Library features a Selection of American Prints, 1900-1953, and Wit and Humor.

Educational activities will offer Painting Classes for children, Saturday mornings; Painting Classes for Adults, each Saturday afternoon; Motion Picture Series—Knute Rockne—All American, starring Pat O'Brien; Story of Alexander Graham Bell; Historical document of "Wilson," president of the U. S.; and The Story of Will Rogers.

Organ Recital each Saturday and Sunday afternoon at 3 o'clock.

ABRAHAM ROSENBERG TRAVELING FELLOWSHIP UNDER CONSIDERATION

Applications for the Abraham Rosenberg Traveling Fellowship are being received by the San Francisco Art Association, 800 Chestnut Street, San Francisco, until the 26th of this month.

The Fellowships are granted annually in the amount of $2400 and are awarded to "gifted artists of painting or sculpture who have demonstrated their ability to accomplish distinguished original work of professional quality" under the terms of a fund generously bequeathed in trust to the Board of Directors of the San Francisco Art Association by the late Abraham Rosenberg.

Applicants must be, or have been, registered at the California School of Fine Arts for at least two regular semesters.

Jury for the 1954 Rosenberg Fellowship are: Mrs. Walter A. Hass, Chairman; Ruth Armer, Alfred Frankenstein, Karl Kasten, Ward Lockwood, Dr. Grace McCann Morley, David Park, and Nell Sinton.

ARCHITECT APPOINTED MEMBER AMERICAN ACADEMY OF ARTS

Arthur Brown, Jr., former president of the San Francisco Art Association, honorary life member and architect with John Bakewell, his partner, has recently been made a member of the American Academy of Arts and Letters.

There are only fifty members, a new member being admitted only following the death of one of the current fifty.

Brown designed the San Francisco War Memorial Building, San Francisco Opera House, Coit Tower, San Francisco City Hall and many other outstanding San Francisco buildings which have gained international recognition.

RARE PAINTING PRESENTED M. H. deYOUNG MUSEUM

A rare and exquisitely beautiful painting "The Annunciation" by the master of Lanckoronski Annunciation was presented to the M. H. deYoung Memorial Museum, San Francisco, by the Museum Society on the occasion of the Society's fifth anniversary exhibition "Gifts Through Five Years."

The new acquisition, formerly in the collection of Count Lanckoronski, Vienna, is possibly an early work of Francesco Pesellino (1422-1457), one of the most sensitive and inventive of the early Florentine painters.

To the Employee Relations Director of every American company

LET'S FACE IT . . . the threat of war and the atom bomb has become a real part of our life—and will be with us for years. Fires, tornadoes and other disasters, too, may strike without warning.

The very lives of your employees are at stake. Yours is a grave responsibility. Consider what may happen.

When the emergency comes, everybody's going to need help at the same time. It may be hours before outside aid reaches you. The best chance of survival for your workers—and the fastest way to get back into production—is to know what to do and be ready to do it. To be unprepared is to gamble with human lives. Disaster may happen TOMORROW. Insist that these simple precautions are taken TODAY:

☐ **Call your local** Civil Defense Director. He'll help you set up a plan for your offices and plant—a plan that's safer, because it's entirely integrated with community Civil Defense action.

☐ **Check contents** and locations of first-aid kits. Be sure they're adequate and up to date. Here again, your CD Director can help—with advice on supplies needed for injuries due to blast, radiation, etc.

☐ **Encourage personnel** to attend Red Cross First Aid Training Courses.

☐ **Encourage your staff** and your community to have their homes prepared. Run ads in your plant paper, in local newspapers, over TV and radio, on bulletin boards. Your CD Director can show you ads that you can sponsor locally. Set the standard of preparedness in your plant city. There's no better way of building prestige and good employee relations—and no greater way of helping America.

Act now . . . check off these four simple points . . . before it's too late.

EFFECTIVE USE OF MASONRY . . . Purlins cantilevered beyond supports.

MUNICIPAL BUILDING
CITY HALL
PALO ALTO, CALIFORNIA

LESLIE I. NICHOLS, Architect

ASSOCIATED CONSTRUCTION CONSULTANTS, ENGINEERS

JOHN SCHWAFEL, Palo Alto
Building Official and Supervisor of Construction

FLOYD F. READ CONSTRUCTION CO.
Masonry Contractor

RALPH LARSEN
General Contractor

Purlins cantilevered beyond their supports in such manner as to reduce the interior moments and reduce the structural cost at the same time, providing the attractive shelter. Also shows how unusual surface textures may be introduced into grouted reinforced masonry.

The Site —

Ideally located outside the congested business area of town providing easy access and excellent parking facilities.

The Problem —

To provide City Hall facilities within a limited budget but with full consideration of long time maintenance costs as well as low initial costs.

Wall is curved in plan and projects above concrete ground flaor entirely free standing insofar as ceiling suppart is concerned. Light acoustical ceiling daes not ottach ta wall. Reinforced by widely spaced bars which were in the interior grout collar jaint, shown at the end of the wall.

Photos by Clay Brick and Tile Ass'n.

The Solution —

Structurally, the long eaves or projections were designed as cantilevers in such a way that the sizes of members were reduced by the balancing cantilever moments, that is, utilizing the architectural features for structural economy. The walls were grouted reinforced masonry, not only to achieve the beauty of surface but to serve as structure as well. The exterior face of brick work was the rug cut brick whereas the interior was sometimes rug cut brick, sometimes smooth faced brick, sometimes glazed structural tile forming a composite wall. The intersecting walls requiring glazed tile surface were made of structural glazed tile reinforced with horizontal ladder reinforcing which was placed economically, yet provided resistance to lateral earthquake loads. Again the finish surface served also as the structural element.

GROUTED WALL CONSTRUCTION

This view shows a corner pilaster being constructed of the grouted reinforced masonry. Note the wide spacing of the reinforcing bars and how there are no ties from one withe to the other except for the poured grout collar joint. Not only does the grout obtain a good bond to the surface of the brick for adhesion but develops a good mechanical bond or key on the surface as shown by the brick in the background.

The reinforcing in the exterior walls was spaced so that there was a minimum of interference insofar as the masons were concerned, i.e., approximately 7 ft. apart. The reinforcing in the walls in many instances was such that the walls could cantilever above the footings and did not require support at the top so that the long line of windows in the wash room areas for example, could be continuous.

It will be of interest to note that there were other unique structural elements contributing to the economy of this building. Basement construction costs were reduced by utilizing interior column capitals and flat slab construction. This reduced the amount of excavation necessary to provide a clear, smooth ceiling in the basement. The forming

GROUTED WALL CONSTRUCTION

This view shows a corner pilaster being constructed of the grouted reinforced masonry. Note the wide spacing of the reinforcing bars and how there are no ties from one withe to the other except for the poured grout collor joint. Not only does the grout obtain a good bond to the surface of the brick for adhesion but develops a good mechanical bond or key on the surface as shown by the brick in the background.

was straight and unbroken by any column capitals which would have impaired the head room.

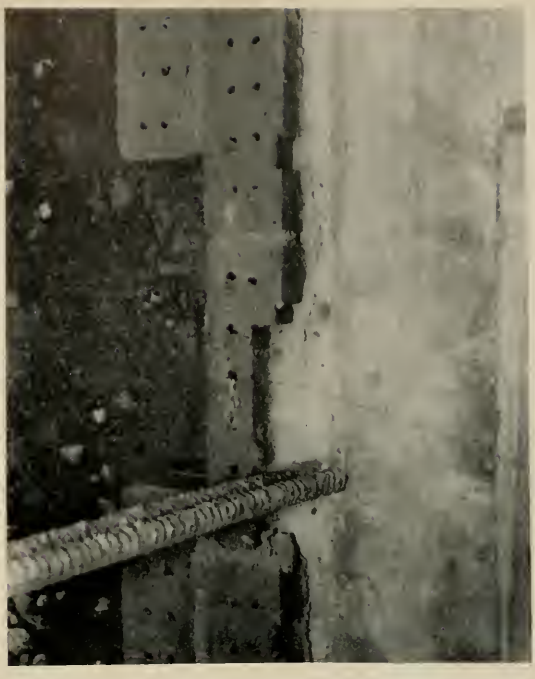
The curved wall shown in photograph (page 11) was reinforced and considered as a free standing self supporting element in imposing any lateral loads on the roof framing. Stability was derived from the curved shape. Heavy reinforcing would have been required had this wall been straight in plan. The grouted reinforced masonry and its versatile use as to interior varying finish was an adaptation of masonry work found to be very effective in power plant construction where maintenance costs are of prime importance.

W. L. Dickey
Structural Engineer-Advisor

COMPOSITE WALL

This shows how one withe can be constructed of structural glazed tile with the other withe of brick work. The ladder reinforcing arrangement of wires is the type that was used in the intersecting cross walls of structural glazed tile. As can be seen, these elements would lie in the joints without interference with the masons' work.

Note how corner brick can be used to form additional space within the wall for an interior structural reinforced element.



COUNCIL MEETING ROOM

Masonry in background shows how the smooth faced brick can be used for a portion of the wall and the rough cut exterior brick in another portion of the same wall, adjacent but exterior.

NIGHT VIEW accentuates unique design of structure.

DESIGNING INSURANCE BUILDING FOR TWO-STAGE OPERATION

EUGENE, OREGON

BALZHISER & SEDER, Architects

By ARTHUR W. PRIAULX

The George B. Schwieger, Jr. Farmer's Insurance Group building just completed in Eugene, Oregon solves a number of problems of the business firm desiring to move away from downtown congested areas.

Architects Balzhiser and Seder, AIA, had one rather difficult problem to conquer in the general design of the insurance building. The agent wished to combine insurance sales and insurance adjustments under one roof. Because it is advisable generally to keep customers desiring to buy insurance from claimants trying to get a claim adjusted away from each other, a traffic problem was immediately apparent.

A DAYTIME LOOK shows striking effect of the sweeping roof lines. Stained rough western cedar tongue-and-groove boards combine beautifully with the glass walls to create a contemporary business building of charm and utility.

Photos by JOM BURNS, Jr.

In handling the traffic problem, Architects Balzhiser and Seder had to provide an entrance for sales which would be easily found by potential customers and an entrance for claims customers which would also be readily found, yet the two had to be separated by some distance to keep the two types of customers apart.

Solving of this problem is a tribute to the ingenuity of these young architcts. The sales office is easily accessible to the street where a full wall of glass identifies the general purpose of the office. A covered arcade running halfway down one side of the building ends in the door to the claims department. Both the door to sales and claims is finished in a Chinese red—a striking contrast to the oil stain finish of the Western red cedar exterior walls. Both entrances open off the arcade. The building has been offset slightly to accomodate the entrance door to the claims section.

The insurance building has been located on a main-traveled east-and-west bound thoroughfare where thousands of cars pass every day. To attract potential customers driving by, the architects created a startlingly novel contemporary design. Atop a single story red cedar and glass structure

LOOK AT THE LOBBY—from the front street window side, shows the handling of arches as exposed roof members; high windows and fluorescent light to develop light.

they designed an unusual cap-like roof made up of twelve barrel-shaped glue-laminated Douglas fir arches.

The arches are thirty-six feet long and built on a sixty-foot curvature radius and present a striking, attention-compelling appearance.

Probably one of the best features of the building

A Full Glass Wall fronts on the street and creates an open lobby with a friendly atmosphere.

is the night lighting. In an effort to avoid the cheapness of too much neon-and-hamburger-stand flash, the architects created an eye-catching low-tone contrast. Each of the twelve barrel arches is supported by steel plates bolted to two two-by-six studs. Installed between the studs are metal louvres intended for dual purpose ventilation when inside cedar panels are opened, or outside indirect night light when fluorescent tubes concealed behind them are lighted. The louvres slant downward, so the effect is to diffuse the light. At night, the twelve columns of light, seven feet apart, the length of the building create the unreal effect of appearing to support the curved arch roof resting on these columns of light. To further heighten the remarkable lighting effect, the name of the firm in pure white raised letters on the wall is brought out in dark light. To the eye accustomed to neon glare, this artistic use of light in the low tone is an effective contrast.

Parking, an increasing problem of all business, is solved by locating the building on the property line so as to throw all possible spare space into the blacktop paved parking area.

The building is an excellent example of how beauty and utility can be combined in the contemporary low-cost, single-story business structure. The cost of this building approximates $9 a square foot.

"We created this contemporary structure out of western red cedar," said Thomas A. Balzhiser, one of the architects, "because we found by proper use of western woods we could get a refreshing freedom from precedence.

"The company has other insurance offices along the coast," Balzhiser pointed out, "which stick pretty close to conventional design. We wanted to design a building which would be a credit to our clients, and at the same time would make a worthwhile contribution to western contemporary design. It took a lot of selling to win our clients over to our ideas, but now we have some mighty happy friends."

The George B. Schwieger building might be

CLAIMS DEPARTMENT—note remarkable effect achieved with use of cedar along one full wall, without break. Private entrance at front, separate from sales department.

called the all cedar building, for not only are the exterior walls finished in tongue-and-groove, rough-sawn Western red cedar, but all interior walls are likewise finished in rough-sawn cedar. An oil stain heavily pigmented has been used on the outside walls and clear material has been used on all inside walls. The east wall of the structure is reinforced concrete. Here again the imagination of the architects developed an attractive feature. Where each barrel-shaped arch joins the cement wall a buttress has been cast into the wall.

The arches are six by fourteen inches in size and are left exposed inside the building. The roof decking is two-by-six hemlock car decking also left exposed inside the structure. Both ceiling and arches have been finished with a stain which has been heavily pigmented to give a light beige cast to the ceiling.

The roof is made up of three-ply asbestos and bonded asphalt coating applied to the decking.

The building is 76 feet by 34 feet with a slight offset where the entrance to the claims department door opens off the arcade. The claims de-

(See Page 31)

ABOVE—small conference rooms in sales department off lobby. Light supplied by windows above normal wall height in additional space gained by arch roof.

ANOTHER VIEW (below) of the claims department, showing conference rooms opening off main office.

Unique Residence Has Multi-colored Roof

WILLIAM C. McEWAN HOME ON

SAN FRANCISCO BAY

SAUSALITO, CALIFORNIA

Wells-Fagliano Photo

TORBEN STRANDGAARD
Architect

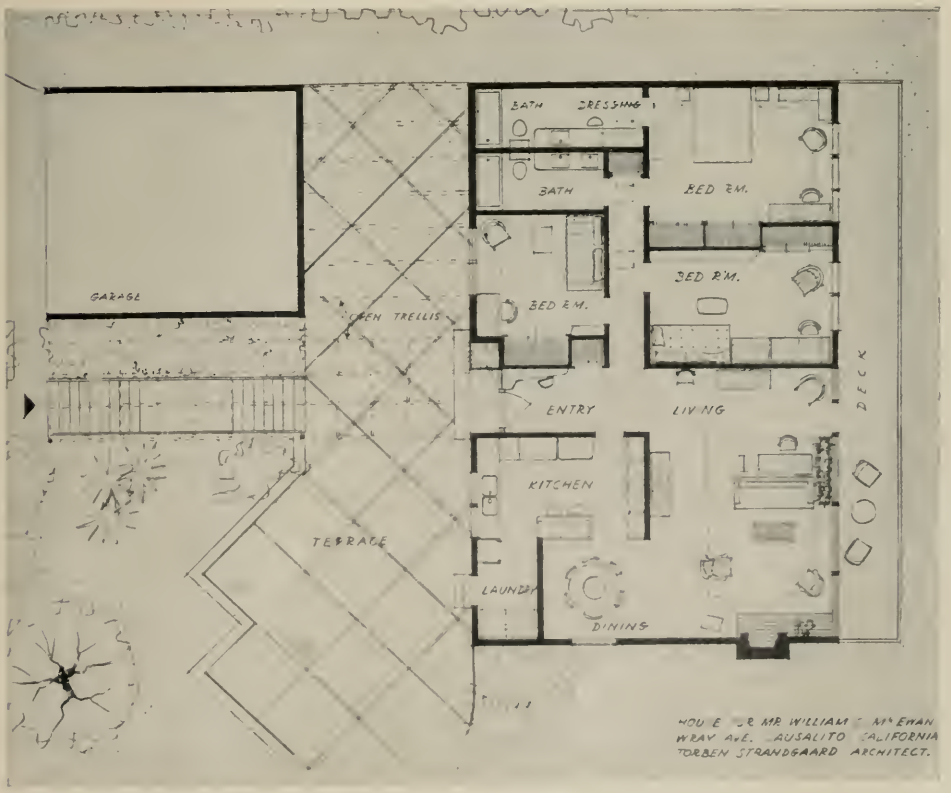
SPECIAL FEATURES—

Simplicity
Low cost
Built for a view
Special roof design in natural-colored gravel

House used for exhibit of Danish furniture to show how contemporary Scandinavian design goes with American living of today and blends with our domestic designs:

THE PROBLEM—

To design a one-family house on a 60-ft. wide rather steep-sloping lot in Sausalito. Orientation, east-west with a wonderful view to the east over Sausalito and the San Francisco Bay. The builder, Mr. Wm. McEwan, has made it his specialty to build individual houses in Sausalito for sale. The house should offer what the clients in this area want in a home, taking into consideration the atphere of suburban living and the special community of Sausalito with nice individual houses in the $25-$35,000 class.



HOUSE FOR MR WILLIAM McEWAN
WRAY AVE. SAUSALITO CALIFORNIA
TORBEN STRANDGAARD ARCHITECT.

Requirements:

Large living room with fireplace, dining area in connection with kitchen. Laundry adjacent to kitchen with door to outside. Three bedrooms, two baths, sun balcony, double garage. If desired, room for future expansion on lower level. The construction cost should be as low as possible giving us maximum usable area. Aera of house to be approximately 1550 square.

Approach to architectural problem:

Sausalito with its steep hillsides sloping down to the waterfront gives an interesting challenge to the architect. The main feature being the magnificent view over the little harbor, the bay and Belvedere peninsula, while the steep slope down from the road immediately puts limitations on the possibilities of the plan. Besides the deck on the east side, it was important to me as designer to provide a more sheltered outdoor living area, on the west side of the house in close connection with the housewife's working area, kitchen and laundry. The living room and one or two bedrooms should obviously face the view.

To design this "custom made spec house" has been one of my most interesting jobs. I have worked in Denmark and Norway with rationalization of building methods and studied this subject in the United States in 1947-1948. In Norway where I designed wood houses for the government's rebuilding program, I was fascinated by the possibilities of simplifying house construction and later on as a member of the editorial staff of the Scandinavian architecture magazine, "Arkitekten," as a specialist in rationalization, I had a chance to work further with these problems.

The builder's experience in the normal requirements for custom made houses of this class and in building these houses in Sausalito for seven years, enabled us to streamline the whole preliminary approach to the planning of the house. We both

Corner of living room facing the bay. The character and natural finish of the Danish furniture is in full harmony with the architecture and way of living in the area.

agreed that by close team work from the start, we would be able to build more home for less money than normal, and the following points were already set up from the sketching stage as important to make a good economical house of today:

—establishing close cooperation between architect and builder.
—utilization of as much modern equipment as possible.
—making the plans simple with straightforward layout for supporting walls, with the resulting simplicity of footings.
—careful studying of details and construction methods.
—using stock material whenever possible.
—using standard framing without complication wherever possible.
—close supervising on job.

(See page 34)

The kitchen is in open connection with dining area, breakfast bar and open serving shelves in between. Furniture to match.

Living room opens out to the sun deck on a level with tree tops . . . wonderful view of Sousolito Harbor and bay waters.

WALNUT CREEK California

SKETCH of the new ST. PAULS EPISCOPAL CHURCH at Walnut Creek, rapidly expanding residential and "cammunity" development area east of Oakland, California. Feature of the construction is a complete installatian of Radiant Heating facilities and equipment. Designed by Julian Fard Taylar and Robert Benson. Walter T. Steilberg, Engineer; Tom W. Boothe, Radiant Heating, and the Ramley Construction Campany was general contractor.

AMERICAN INSTITUTE OF ARCHITECTS

UNIFORM CONSTRUCTION IDENTIFICATION

Designed by A.I.A. committee, of Pasadena, California.

The idea of the "uniform sign" and its design was the result of an extended study on the part of the Public Relations Committee of the Pasadena Chapter of The American Institute of Architects, and the wholehearted national reception of the sign indicates the intention of the Committee to develop an identification that would sell the "profession as a whole" to the public has been quite successful.

The sign, composed of two panels, the larger 32 inches by 20 inches and the smaller 17 inches by 8 inches, projected one and one-half inches in front of the large panel by means of a spacer block, is eye-catching, colorful and dignified. Panel is painted Van Dyke brown with white letters.

HENRY L. BADGER APPOINTED TO EXECUTIVE ASSISTANT PANAMA LAMP

Guy de Leuze, president of Panama Lamp & Commercial Co, Inc., San Francisco, has announced the appointment of Henry L. Badger as assistant to the General Manager, in charge of internal operations of the company.

Prior to assuming his new duties, Badger was engaged in a number of activities in Southern California which were closely allied to the construction materials industry.

SEATTLE ARCHITECT ATTENDS NATIONAL CHURCH CONFERENCE

Robert L. Durham, A.I.A. architect of Seattle, attended the recent National Joint Convention on Church Architecture held in Knoxville, Tennessee.

The Conference is sponsored by the Church Architectural Guild of America and the Bureau of Church Building of the National Council of Churches of Christ in the United States of America, and is designed to promote a better understanding of church architecture.

ANNUAL CONSTRUCTION INDUSTRIES GRIDIRON BANQUET SCHEDULED

The Annual Construction Industries Gridiron Banquet, representing the construction industry of Southern California, has been scheduled for Wednesday evening March 17, in the Biltmore Bowl, Los Angeles.

ARCHITECT EDWARD F. GLASS, A.I.A.

Edward F. Glass, 68, native of San Francisco and long time resident of Fresno where he engaged in the practice of architecture, died in San Francisco early this month following a brief illness. Glass designed many schools and hospitals and at the time of his death was an architectural designer for the U. S. Navy.

Housebuilding in Transition

By
Sherman J. Maisel

A major work about the housebuilding industry based on case studies in the San Francisco Bay Area, with a discussion of likely trends in management, performance, size and cost. 406 pages
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AN INVESTMENT BLUEPRINT for ARCHITECTS & ENGINEERS

By FRANK J. KIHM*

Want to buy stock in an investment company emphasizing California industries? Or one for Texas and the Southwest? Do you feel that the Canadian economy has possibilities.

If your views are affirmative in any one or all three instances, there are mutual funds operating at present designed to invest your money in these special situations. And, in conformity with the principles governing the operations of mutual funds, the money pooled by the shareholders is invested in the securities of companies which, in the managements' opinion, offer the best potentialities for growth of principal and income.

FRANK J. KIHM
Consultant H. E. Work & Co., San Francisco

To a certain extent these "specialized" investment companies negate the principle of widespread diversification that characterizes the more conservative companies. The net asset value and the income return of any mutual fund are subject to fluctuations in line with market price changes of the fund's investments and the income derived therefrom. While a combination of favorable circumstances in a particular state, country, or industry might cause a commensurate appreciation in the asset value of a fund's shares, adverse factors could result in a corresponding loss.

However a mutual fund with a large amount of capital and not having a restricted investment policy, may hold more than 100 different stocks in twenty to thirty industries. While some stocks in the portfolios of these widely diversified companies may shrink in value, others may gain, and the average may be better than the specialized funds. But all will rise and fall in varying degrees with the general market.

Investment companies are usually broken down into two broad classifications—open end, and closed end. Open end companies are those which continuously offer new shares at asset value plus a fixed selling charge averaging about 7½%. Their shares are redeemable at any time at approximate asset value which may be greater or less than cost. Closed end companies are those with a relatively fixed investment capital, which do not issue new shares, and whose securities are traded on a stock exchange or in unlisted markets in the same way as other corporate securities.

Open end funds have three main sub-divisions—balanced funds, income funds, and capital growth funds. The dividing lines are not clearly defined; many funds have the joint objectives of capital appreciation as well as income.

Balanced funds are generally considered the most conservative. They hold substantial amounts of their capital in bonds, preferred stocks and cash in order to maintain greater stability of asset value and income return. Such investments may range from 25% to 40%, and the remainder is usually invested in common stocks. From time to time the ratio may change as the fund adjusts itself to the management's appraisal of economic conditions. Quotations for balanced funds tend to fluctuate less widely. Income funds are invested in securities paying the highest return consistent with accepted investment principles.

Growth funds are concentrated in common stocks of companies which are believed to possess higher than usual potentialities for income and appreciation. Such companies seek new and improved products through intensive research, or better production methods and wider markets. They usually "plow back" or retain in the company a substantial portion of earnings.

EDITOR'S NOTE: Mr. Kihm is well qualified to discuss the investment needs of professional people. He was Executive Secretary of the San Francisco Medical Society from 1945 to 1952, and City Editor of the Wall Street Journal (San Francisco) from 1939 to 1945, and has contributed articles to Barron's and other business publications. He is now with the San Francisco investment banking firm of H. E. Work & Co. This is the fifth of a series of special articles written for ARCHITECT & ENGINEER magazine. Another article will appear next month.

American Institute of Architects

Clair W. Ditchy, President
Norman J. Schlossman, 1st Vice-President
Howard Eichenbaum, 2nd Vice-President
George Bain Cummings, Secretary
Maurice J. Sullivan, Treasurer

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Washington, D. C.

Edmund R. Purves
Executive Secretary

Arizona Chapter:
Lew Place (Tucson), President; Ralph Haver (Phoenix), Vice-President; Fred O. Knipe (Tucson), Secretary; James W. Elmore (Phoenix), Treasurer. Secretary Offices, 1324 E. Lester St., Tucson.

Coast Valleys Chapter:
Kurt Gross, President; Harold Ahnfeldt, Vice-President; Frank C. Treseder, Secretary; Jerome Kasavan, Treasurer. Directors, Hollis Logue and Gifford Sobey. Offices, 82 S. 3rd St., San Jose.

Central Valley of California:
John W. Bomberger, President; Nicholas Tomich, Vice-President; Albert B. Thomas, Secretary; Ted de Wolf, Treas.; Gordon Stafford, Director; Alternate to CCA, Silvio Barovetto; Sec. Office 718 Alhambra Blvd., Sacramento.

Colorado Chapter:
James M. Hunter, President, 2049 Broadway, Boulder; Casper F. Hegner, Secretary, 1659 Grant Street, Denver 5.

East Bay Chapter:
Malcolm D. Reynolds, President; Donald Hardison, Vice-President; John Lloyd, Secretary; Ed Cerruti, Treasurer. Directors: Chester Treichel, Ira Beals, Cecil Moyer. Secretary's office: 1171 Solano Ave., Albany.

Idaho Chapter:
C. V. Wayland, Boise, President; Cecil E. Jones, Twin Falls, Vice-President; Thomas M. I. Leake, Boise, Sec.-Treas.; Anton Dropping, Boise, Exec. Comm. Member. Office of Secretary, Suite 405 Sun Bldg., Boise.

Montana Chapter:
E. Edward Scowcroft, President (Billings); J. Van Teylingen, Vice-President (Great Falls); H. C. Cheever, Secretary-Treasurer. Secretary office, Bozeman.

Nevada Chapter:
Russell Mills, President, Reno; Harris P. Sharp, Vice-President, Las Vegas; E. Keith Lockard, Secretary, Reno; Edward S. Parsons, Treasurer, Reno. Directors: L. A. Ferris, David Vhay, Reno, and Waltez Zick, Las Vegas. Office of President: 309 N. Virginia St., Reno.

Nevada State Board of Architects:
Russell Mills, Chairman, Reno; Aloysius MacDonald, Secretary, Las Vegas; Edward Parsons, L. A. Ferris, Reno, and Richard Stadleman, Los Vegas, Members. Office, 309 S. 5th St., Las Vegas.

Northern California Chapter:
Donn Emmons, President; Wendell R. Spackman, Vice-President; William Corlett, Secretary; Bernard J. Sabaroff, Treasurer. Directors: Charles S. Pope, Wm. Stephan Allen and Lawrence A. Kruse. Helen H. Ashton, Office Sec., Office, 26 O'Farrell St., San Francisco.

AMERICAN INSTITUTE OF ARCHITECTS APPOINTS HAUF

The appointment of Harold D. Hauf of New Haven as Director of the Department of Public and Professional Relations of The American Institute of Architects has been announced by Edmund R. Purves, Executive Director of the national architectural professional organization.

Hauf has a long and varied experience in the field of architecture and architectural engineering. He assumed his new duties on February 1st.

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NORTHERN CALIFORNIA CHAPTER

President Donn Emmons announced recently that arrangements have been completed whereby permanent exhibit space will be available to the Chapter in lobby of the Merchandise Mart in San Francisco. Member exhibits will be chosen by Chapter and limited to 60 percent residential and 40 percent commercial, industrial and community projects. Each exhibit will be limited to a maximum of three months duration.

The Chapter recently approved the 1954 budget which was set at $20,000, representing an increase over last year, due largely to an increased program of public relations and professional promotion.

A recent survey among members indicate a substantial majority are in favor of inclusion of architects in the Social Security Program (Federal). Of 103 replies, 65 were in favor, 37 were opposed and 1 was neutral.

OREGON CHAPTER

Albert Gerlach, stained glass artist, presented a group of colored slides on European and American, medieval and modern, stained glass at a recent meeting. He was for many years with the W. P. Fuller Co., and is now operating his own studio for the design and manufacture of stained glass.

Chairman H. Brookman announces the appoint-

Orange County Chapter:
Paul O. Davis (Las Angeles), President; Ralph Modjeski (Santa Ana), Vice-President; Geo. Lind (Newport Beach), Secretary; Wm. L. Faulkner (Santa Ana), Treasurer. Secretary's Office: 2919 Newport Blvd., Newport Beach.

Oregon Chapter:
Halman J. Barnes, President; Albert W. Hilgers, Vice-President; Donald W. Edmundson, Secretary; DeWitt C. Robinson, Treasurer, and H. Abbott Lawrence, Trustee. Office of Secretary, 325 Henry Bldg., Portland.

Pasadena Chapter:
Wallace C. Bonsall, President; Henry C. Burge, Vice-President; George A. Schaffer, Secretary; Robert S. Cook, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Victor L. Wulff, President; Richard L. Pinnell, Vice-President; Edward G. Holliday, Secretary; Delmar S. Mitchell, Treasurer. Directors, Donald Campbell, Jack R. Lewis and Louis A. Dean. Sec'y Office, 4562 Boundary St., San Diego.

San Joaquin Chapter:
John P. Miller (Fresno), President; Byron C. Brodrick (Fresno), Vice-President; Allen Y. Lew (Fresno), Secretary; Lloyd J. Fletcher (Visalia), Treasurer. Directors, Wm. G. Hyberg, Robert C. Kaestner, Maurice J. Metz. Sec. Office, Fulton-Fresno Bldg., Fresno.

Santa Barbara Chapter:
Miss Lutah Maria Riggs, President; Roy C. Wilson, Vice-President; Chester L. Carjala, Secretary; Roy W. Cheesman, Treasurer. Corres. Secy.; Richard B. Nelson, 3033 Calle Rosales, Santa Barbara.

Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
John S. Detlie, President; Ralf E. Decker, 1st Vice-President; Edwin T. Turner, 2nd Vice-President; Wendell H. Lavett, Secretary; Arnold G. Gangnes, Treas. Directors Paul Thiry, William J. Bain, J. Emil Anderson and Robert B. Price. Dayis Holcomb, Ex-Sec., 409 Central Bldg., Seattle 4.

Spokane Chapter:
Tom Adkinson, President; Carroll Martel, Vice-President; Harry Weller, 2nd Vice-President; William James, Secretary; Lawrence Evanoff, Treasurer. Office of the Secretary, W. 524 - 4th Ave., Spokane.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

CALIFORNIA COUNCIL OF ARCHITECTS
Charles E. Fry, President, Los Angeles; Malcolm D. Reynolds, Oakland, Vice-President; Lawrence Gentry, Los Altos, Secretary; Louis A. Dean, San Diego, Treasurer; Miss Rhoda Monks, Secy. Offices 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BOARD ARCHITECTURAL EXAMINERS:
George P. Simonds (Oakland), President; Ulysses Floyd Rible (Los Angeles, Secretary; Earl T. Heitschmidt (Los Angeles); C. J. Paderewski (San Diego); Norman K. Blanchard (San Francisco). Exec. Secy., Robert K. Kelley, Room 712, 145 S. Spring St., Los Angeles; San Francisco Office, Room 300, 507 Polk Street.

ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

ment of I. G. Smith, H. A. Lawrence and W. Church to membership on the "Awards Committee."

New Member—Gordon Trapp has been elected to Corporate membership.

ARCHITECTURAL JOURNALISM AWARDS SPONSORED BY INSTITUTE

Announcement of the winners of the 1953 Architectural Journalism Awards, sponsored by The American Institute of Architects, will be announced early in March, with presentations to the winning publications being made by local A.I.A. Chapters throughout the nation.

Awards will be made in the field of writing and photography.

ORANGE COUNTY CHAPTER

Clair Ditchy, president of The American Institute of Architects, conducted the installation of newly elected officers at a recent meeting.

Elected to serve for the year 1954 were: Philmer J. Ellerbroek, president; John A. Nordbak, vice-president; Charles A. Hunter, Treasurer; and Gates W. Burrows, secretary. Named as Directors were Everett E. Parks, Charles A. Hunter, and Everett Lynn Child.

CALIFORNIA COUNCIL OF ARCHITECTS

President Charles E. Fry, AIA, Los Angeles architect, recently announced offices of the California Council of Architects would be moved from Los Angeles to San Francisco and under supervision of Melton Ferris who has been named to succeed Fred Chase. Ferris comes to the CCA from the San Francisco Chronicle where he has been photo editor.

Chase will continue to represent the architects in certain specific capacities, such as coordinator of legislative activities.

(See page 32)

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Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

William H. Peterson, President; Walter S. Wassum, Vice-President; O. T. Illerich, Sec.-Treas.; Ernest D. Francis, M. A. Ewing, and Arthur A. Sauer, directors. Office O. T. Illerich, c/o Div. of Arch., Sacramento.

American Society of Civil Engineers Los Angeles Section

Sterling S. Green, President; Ralph W. Spencer, Vice-President; Walter B. Hollingsworth, Vice-President; C. Martin Duke, Secretary; Gilbert W. Outland, Treasurer. Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

The new "Richmond-San Rafael Bridge Project" was the subject of discussion at the February meeting held in San Francisco, with Norman C. Raab, Projects Engineer, Division of San Francisco Bay Toll Crossings; Ben Balala, principal Bridge Engineer in charge of Project Construction; and Ben C. Gerwick, Jr., vice-president of Ben C. Gerwick, Inc., General Contractors, the principal speakers.

Directly concerned with the engineering complexities of this vast San Francisco bay area project the speakers covered the matter of work, administration and contracts.

President Michael V. Pregnoff announced a number of Committee appointments to serve the Association during the ensuing year.

New Members — Frank Baron, W. B. Clausen, F. F. Herrero, F. Robert Preece, and Jack E. Zimmerman. Junior Members, H. Robert Hammill and Henry P. Schultz.

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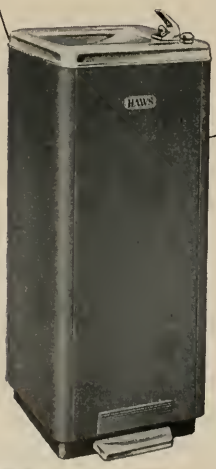

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AMERICAN SOCIETY CIVIL ENGINEERS LOS ANGELES SECTION ELECTION

The Los Angeles Section of the American Society of Civil Engineers recently elected the following officers to serve during the year 1954: Sterling F. Green, president; Ralph W. Spencer, vice-president; Walter Hollingworth, vice-president; Gilbert Outland, treasurer, and C. Martin Duke will serve another year as secretary having been elected in 1953 to serve a two year term.

Duke is an Associate Professor of Engineering at the University of California at Los Angeles and devotes considerable time to the affairs of the Section.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The Structural Engineers Association of Southern California celebrated its Silver Anniversary with a dinner meeting February 3rd in Los Angeles.

More than two-hundred members and guests joined in honoring the founder members of the Association: Rufus Beanfield, Oliver Bowen, Wendell Butts. Ralph DeLine, Clarence Derrick, Murray Erick, Mark Falk, Paul Jeffers, Preston Jones, R. R. Martel, William Mellema, C. E. Noerenberg and Blaine Noice. Founder members present at the meeting included Beanfield, Bowen, Derrick, DeLine, Erick, Mellema, and Noice.

The SEAOSC was organized before the enactment of the Civil Engineers Act in the State of

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Canahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of
Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of
Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
L. A. O'Leary, Chairman; P. V. Garin, Vice-chairman; H. P. Hoopes, Sec. Office Sec., 1550 Powell St., Emeryville, Calif.

Society of American Military
Engineers—San Francisco Post
CDR N. M. Martinsen, President; L. L. Wise, 1st Vice-President; Col. Paul Berrigan, 2nd Vice-President; R. M. Hamilton, Secretary; Thomas Hurley, Treasurer. Directors, RADM C. A. Trexel, J. G. Wright, LTCOL C. S. Lindsey, C. E. Bentley, F. R. Fowler, BRIGEN D. F. Johns, and RADM L. N. Moeller.

California and through organized effort of the group recognition by the State was given to the structural engineer as a distinct division of engineering.

The first meeting was held at the University Club with Paul Jeffers (now deceased) being elected president; Mark Falk was elected vice president and Ralph DeLine, secretary-treasurer. Since that time meetings have been held regularly and from the original thirteen founder members the membership has grown until it now totals more than four hundred and twenty five.

The technical part of the Silver Anniversary meeting was devoted to a discussion of "The Use of Models in Structural Analysis" with Ray W. Clough, Assistant Professor of Civil Engineering, University of California, leading the discussion and offering a number of illustrated slides.

New Members: Felix Kulka, Albert O. Grote, and William J. Keener, Associate. J. P. Porterfield, Allied.

FEMINEERS

Katherine Hanrahan, Research Attorney for the Supreme Court, was the principal speaker at the February meeting of the Femineers, held in the Elks Club, San Francisco.

Taking as her subject "Women's Property Rights," the speaker gave a very interesting and informative talk.

Officers named for the 1954 year include Mrs. Arthur B. Smith, Jr., president; Mrs. E. K. McKesson, vice-president; Mrs. V. R. Sandner, secretary; Mrs. Leslie Graham, treasurer; and directors Mrs. Theodore Newman and Mrs. Bernard Vallerga.

AMERICAN SOCIETY OF CIVIL ENGINEERS SAN FRANCISCO SECTION

John E. Rinne, civil engineering and architectural head of the Standard Oil Company of California engineering department, was elected president of the San Francisco Section of the American Society of Civil Engineers at the Society's recent annual meeting.

Rinne is the graduate of the University of California, Berkeley, and past president of the Structural Engineers Association of California.

Other officers chosen to serve during the ensuing year included Howard C. Wood, vice-president; Robert D. Dewell, vice-president; J. G. Wright, past

(See page 33)

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Edited by Stanley L. Basterash—WESTERN ASBESTOS COMPANY

ROLAND S. MacNICHOL

President
Producer's Council,
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Chapter, 1953-54

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INFORMATIONAL PROGRAMS

Dr. J. D. MacConnel, Director of School Plant Planning Laboratory, Stanford University, was the keynote speaker on February 1st. His subject was "What The Educator Wants In Classroom Thermal Environment," giving those in attendance an insight into the educator's approach to the equipment and design of the mechanical system that best meets the educator's needs. This program was under joint sponsorship of The American Air Filter and Minneapolis Honeywell Regulator Co. The discussion panel was personalized with Dr. McConnell, Ed Dill and Bill Polhemus. Another headliner program.

LITERATURE COMPETITION

The San Francisco Chapter of The Producers' Council will this year work jointly with the local chapter of the American Institute of Architects in sponsoring and judging of a literature competition.

This is not a new activity with the P.C. on a national level, but is this year under Pete Christensen, joint A.I.A.-P.C. Committee Chairman, pioneering the field in this area and hope we will have the backing of each and every member.

The purpose of the competition being to give all a clearer understanding of exactly what is required from us in the way of descriptive literature which will be of greatest assistance to the architect.

Classifications for the competition are as follows:

1. LITERATURE CONCERNED WITH BASIC TECHNICAL INFORMATION. (This manual or handbook may have been designed and produced by a group or an individual manufacturer.)

2. LITERATURE OFFERING TECHNICAL INFORMATION CONFINED TO THE PARTICULAR PRODUCTS OF A SINGLE MANUFACTURER.

3. LITERATURE OF PRIMARILY PROMOTIONAL NATURE. (Sheets or short folders supplemental to Classes 1 and 2, intended to keep the manufacturer's name in the Architects' attention.)

4. SPACE ADVERTISING DIRECTED PRIMARILY TO THE ARCHITECT.

It is important to you and your Company to enter as many of these classes as possible for reason that the final results at the national level are very much influenced by the results of the local judging.

Program Speaker
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More than 250 members and guests attending the January meeting heard this outstanding speaker.

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INSURANCE BUILDING

(From page 19)

partment has been completely separated from the sales offices by a solid partition.

Interior glass walls and partitions give the illusion of larger size to the smaller sales conference rooms by showing more of the ceiling. A novel method of light distribution has been worked out by the architects. Lights from any room in the sales office light up any other room in this series. The glass partitions do the trick.

The cedar motif has been carried out even to counters, gates, and built-in cabinets. Here, too, the cedar has been clear finished.

A seven-foot module has been used throughout the building and has been adapted to required room sizes. The module starts with the arch spacing. The architects believe the seven-foot module contributes to low cost in this building because material can be utilized without loss. For instance, fourteen foot material is easy to purchase, and this length covers two module units without waste. The formula has been applied throughout the structure and contributes appreciably to savings in construction costs.

Heating is a perimeter-type, forced-air, double-spider-web system of galvanized ducts cast right in the concrete floor. Vents come up in the floor on the outer perimeter of the rooms and are six foot on center. A system has been worked out to catch the cold air off the windows with warm air.

The solid glass wall which forms the front of the unusual structure where it faces the street is made of thermalplate glass and reaches from floor to ceiling arch.

A further word on another feature of cedar which Architects Balzhiser and Seder admire. This soft and warm wood makes an aesthetic contribution to this building through the beauty of its grain and texture. It also is a wood that is easily finished and preserved.

The floor is a concrete slab covered with rubber tile flooring.

The claims department, like the sales department features a comfortably sized lobby separated from the main office by a counter. Claims has a large main office for clerical and stenographic work area and smaller offices open from this where more personal conference work is handled. Smaller conference rooms in both sales and claims are complete walled-in units for privacy.

The architects have gotten the most out of blending glass and cedar. The two materials compliment each other and give complete utility to the structure. There is no waste space in this compact business unit. One attractive feature is the open appearance of the building. This effect is created by the height of the ceiling which is as much as twelve feet at the top curve of the arch.

Planters will be installed in the area adjoining the west side of the building where shrubs will be grown. The vegetation will create a cool air flow which will work through the louvred ventilators along that wall.

This is an altogether charming and distinctive structure, a credit to the architects willing to work out of the conventional rut, and to the owners who went along with the new ideas.

ROBCO OF CALIFORNIA ENTERS CONSTRUCTION MATERIAL FIELD

The Robinson Brick & Tile Company of Denver, Colorado, recently announced formation of ROBCO of California, Inc., which will excusively distribute Structural Ceramic Glazed Tile, Brick and other products it manufactures and distributes in California and Nevada.

Joseph B. Peebles, well known in the building material manufacturing industry, has been appointed manager of the new firm, and H. V. Himsl, also well known in the construction industry, has been named to an executive position.

Offices have been opened in San Francisco and Los Angeles.

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PERSONALITIES

ROBERT HOGAN
Lumber Dealer

Oakland, California

The name "Hogan" has been synonymous with the lumber industry on the West Coast for a great many years, and the name Robert Hogan represents the third generation of Hogans identified with the Hogan Lumber Company of Oakland, one of the pioneers of the lumber industry on the Pacific Coast.

ROBERT HOGAN
Lumberman

Robert Hogan was born on January 21, 1921 in Oakland, California, and received his early education in Piedmont public schools. He was graduated from the University of California, Class of '42; participation in sports included 3-year letter-man in track (440 and 880) and Captain of the track team in 1942.

Following attendance at the Supply Corps School, Harvard University, Hogan was commissioned an Ensign in the U. S. Navy and served during World War II in the Atlantic and Pacific theaters, aboard destroyer and cruiser craft, and in 1946 resigned from the U. S. Navy with the grade of Lieutenant.

Hogan joined the Hogan Lumber Company in 1946, and following a number of activities now represents the firm in the capacity of Vice-president in charge of wholesale distribution.

Active in civic affairs, he is also president of the Woodwork Institute of California.

Hogan lives in San Francisco with his family of four—wife, two daughters and a son. His hobby is his family, with an occasional game of golf.

Next Month: William T. Wright, Structural Engineer, Los Angeles.

A.I.A. ACTIVITIES

(Continued from page 27)

Miss Rhoda Monks has also been appointed secretary of the CCA and will assume her new duties in the San Francisco office.

Announcement has been made that the annual convention of the CCA will be held this year at Hoberg's Resort in Lake County. F. Bourn Hayne,

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AIA, San Francisco, has been named general convention chairman and is already working on many details. Dates of the conference have been set for Thursday, Friday and Saturday, September 30, and October 1-2.

CALIFORNIA CHANGES ARCHITECTS LICENSE RENEWAL DATES

The California State Board of Architectural Examiners call attention to a change made by the State Legislature in the date for renewal of architect's annual license.

Architect's annual license fee will become due August 31, 1954, and continue annually from that date, and the fee of $12 due at that time will carry the license through to August 31, 1955. From then on the renewal period will be August rather than January. This was done to decrease the work load in the office at the time December examinations are being prepared.

SOUTHERN CALIFORNIA CHAPTER

Douglas Honnold, chairman of the Public Relations Committee, is preparing material for publication of a guide to outstanding architecture in the Southern California area.

The February meeting was held at the offices of the General Controls Co., Burbank. Following a brief business meeting, members were taken on a tour of the General Controls plant.

William Glenn Balch has been elected delegate at large, and C. M. Deasy delegate from the Executive Committee to serve on the California Council of Architects. Also serving on the CCA will be Henry L. Wright and Ulysses Floyd Rible.

SAN FRANCISCO ARCHITECTURAL CLUB SCHEDULES 1954 SEMINAR

The San Francisco Architectural Club is again offering an architectural seminar, or review course, for those who plan to take the examination of the California State Board of Architectural Examiners this year.

The Seminar will consist of twenty-two lectures given by well qualified men of the architectural and engineering profession, and will cover all divisions of the examination.

All classes are held at the San Francisco Architectural Club, 507 Howard Street, and complete information relative to the Seminar may be had by communicating with the offices there.

SAN DIEGO CHAPTER

New officers for the San Diego Chapter, A.I.A., elected and installed at the recent annual meeting, included:

Victor L. Wulff, President; Richard L. Pinnell, Vice-President; Edward G. Holliday, Secretary, and Delmar S. Mitchell, Treasurer. Jack R. Lewis and Louis A. Dean, Directors; and Donald Campbell was named to represent the Chapter on the California Council of Architects.

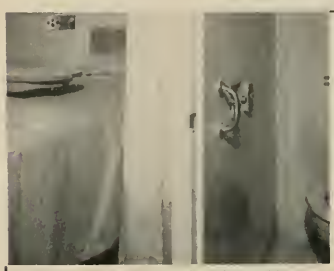
WITH THE ENGINEERS

(Continued from page 29)

president; H. Christopher Medbery, secretary; Richard C. Clark, treasurer; and James E. McCarty, Jr., president of the Junior Forum.

SOCIETY OF WOMEN ENGINEERS MEET

The Society of Women Engineers, national organization of women in engineering, will hold its 1954 Annual Convention at the Mayflower Hotel, Washington, D. C. on March 6-7.



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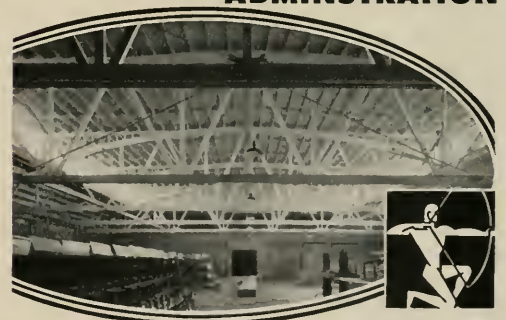

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ANGELO E. GUERRA NAMED ASSISTANT TERRITORIAL SALES MANAGER

Angelo E. Guerra has been appointed Assistant Territorial Manager of the Mosaic Tile Company, and to the area already covered by Guerra as District Manager which included San Francisco, Seattle and Salt Lake, the State of Montana, the British Columbia district and the territory of Alaska has been added.

ANGELO E. GUERRA

Guerra has been associated with The Mosaic Tile organization for the past 27 years, acquiring his knowledge of the clay tile business in the capacity of warehouse shipping clerk, and from there advanced to the sales division. In 1940 he was made Office Manager of the Los Angeles branch and in 1943 was made manager of the San Francisco office and warehouse.

Guerra opened up the Salt Lake City office and warehouse in 1950, and the new Fresno office and warehouse in 1953. He is a member of the West Coast Sales Committee.

SAN FRANCISCO BAY HOME

(Continued from page 23)

Solution:

The house has a living room (16' x 24') with the east wall being glass from floor to ceiling between the posts, and dining area (9' x 9'), master bedroom (12' x 16') and bedroom (10' x 16') facing east with a 6 ft. balcony the full length of the house. The third bedroom (11' x 11'), 2 bathrooms and kitchen with laundry facing the street, with a sheltered afternoon terrace—easily accessible from the kitchen area.

A large egg-crate trellis work forms a "covered" stairway from street to house and helps link house and garage together. The terrace area between garage and house is dedicated to clothes drying, etc. A multi-purpose room, study or even a little apartment (for which future connection with plumbing is provided) can be installed in the 16' x 48' room on lower level.

Areas:

House	1590 square ft.
Garage	450 square ft.
Multi-purpose room	780 square ft.

The plan expresses the desired simplicity by means of the 3 parallel supporting walls without complicated corner solutions. A 3 ft. module was used in the lay out, with 6 ft. module in the spacing of the exposed roof beams. The study of the details and dimensions resulted in extensive use of stock material with only one "special" moulding.

Construction: lower part: standard framing; upper part: posts and beams.

Interior wall: sheet rock in bedrooms and mahogany plywood in living room, entry and dining area.

Ceiling: exposed 2 x 6 Redwood planks.

Floors: in living room: dark oak floor; in kitchen and bathroom floors: linoleum; table tops in kitchen and bathroom: yellow formica.

Roof: Tar and gravel roof on 2 x 6 T & G planks.

The combination of the professional approach of the architect and the experience of the builder resulted in a square ft. price two to four dollars under the normal in this area. We think that this close cooperation makes a more efficient operation than can be achieved by the normal procedure of the client's architect designing the house, then calling for bids from several contractors and then revising the drawings to bring a high cost down, more through elimination than by simplification and better utilization of materials—then finally letting the lowest bidder build the house.

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best solution in all cases, but my experience in several cases, when the contractor was chosen before the architect started designing, shows me that it sometimes can be beneficial.

Multi-colored Roof:

Having been in Sausalito a few times looking down on the roofs from the hillside roads, I thought that roofs, when they play so important a role in the landscape, should be given more attention from the architect.

When I had some samples of different natural colored roof gravel in my hand, I got the idea of using this material to make the roof more interesting. Being a Dane, I had actually never had American roof gravel in my hand before. It is never used in Denmark and was quite new to me, but I saw the possibility of using this gravel in a mosaic form on my hillside project.

The owner's reaction to my suggestion was: "Torben, this seems like a wild idea, let's do it!"

I then designed an abstract decorative layout for 4 different colored gravels. I have had some experience in collaboration of art, architecture and craftsmanship, which unfortunately in this country seems to be neglected more than any other place.

I had to avoid the effect of an abstract painting **on** a roof. My first sketches with freer forms of nature with a more fluid design, I gave up. They might have been nice for an abstract decoration attached to the house, but not as an integral part of the architecture. The design, and the use of the colored gravel should be done in such a way that the plane was kept, that the roof would be accentuated with the discreet colors and that the character of the gravel would be retained, effecting harmony with both the house and the surroundings. The result was a geometrical layout using: grey gravel, red crushed brick, grey-purple "Haydite" and white rock in rectangular shapes.

The multi-colored roof has aroused quite an interest, being the first "designed" roof here (and maybe in the United States).

Interior decoration:

The idea behind the special furnishing of this house was to show how well the modern Danish design in furniture and accessories fits into American homes and way of living and how it can be used in harmony with American domestic furniture.

WOODWORK INSTITUTE OF CALIFORNIA ELECTS OFFICERS

Robert Hogan of the Hogan Lumber Company, Oakland, was elected president of the Woodwork Institute of California at the 3rd Annual Meeting of the Institute recently held in Bakersfield, California.

Other officers elected to serve with Hogan during the ensuing year included: Byron K. Taylor, Taylor Millwork & Stair Company, Los Angeles, 1st Vice-president; J. L. Pierce, Pacific Manufacturing Company, Santa Clara, 2nd Vice-president; James Moore, Long-Bell Lumber Company, San Francisco, Treasurer; and Russell Bjorn, Manager-Director.

Directors are W. Perry Acuff, Western Lumber Co, San Diego; Ernie F. Atkinson, Clinton Mill & Mfg. Co., Oakland; Francis Haley, Haley Bros, Santa Monica; Stanley Gustafson, Sierra Mill & Lumber Co, Sacramento; H. Truxton Jones, Western Door & Sash Co, Oakland; Harry M. Libby, John W. Koehl & Son, Inc., Los Angeles; Jack Little, Union Planing Mill, Stockton; C. E. Morrison, California Mfg. Co, Inc., Sacramento; Seth Potter, Stockton Box Co, Stockton; Rex Sporleder, Hollenbeck-Bush Planing Mill Co, Fresno; Tom Work, Jr., The Work Mill & Cabinet Co, Inc., Monterey; Roy L. Young, Pacific Lumber Dealers Supply Inc., Harbor City.

More than 64 firms were represented at the meeting from all parts of California.

Highlight of the technical session was an address by F. Bourn Hayne, A.I.A. Architect of San Francisco, and prominent in American Institute of Architects activities on the Pacific Coast. Advantages of close relationship between architects and

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manufacturers of building materials was pointed out and the Institute was praised for its publication of the "Manual of Millwork" which establishes standards for the industry in California.

CERTIFICATE OF ACHIEVEMENT PRESENTED TO TOM DILLON

Ben Dingman, newly appointed General Sales Manager of the Pacific Tile and Porcelain Company of Los Angeles (left) presents a Certificate of Sales Achievement to Tom Dillon, head of the Dillon Tile Supply Company of San Francisco and long time distributor for the Pacific Company's tile products.

Dingman, on his recent inaugural swing around the Western States territory, announced a new distributor policy and the appointment of additional distributors in Salt Lake City, Utah, and Phoenix, Arizona.

Prior to assuming his new duties as general sales manager, Dingman was sales representative for Pacific Tile in the Southern California territory.

ORANGE COUNTY CHAPTER

Philmer J. Ellerbroek was elected president of the Orange County Chapter, A.I.A. at the annual meeting.

Elected to serve with him during 1954 were: John A. Nordbak, Vice-president; Charles A. Hunter, Treasurer; Gates W. Burrows, Secretary; and Everett E. Parks, Charles A. Hunter and Everett Lynn Child, Directors.

WOMEN'S ARCHITECTURAL LEAGUE OF OREGON

Marian Dukehart, Chairman of the Women's Architectural League of Oregon, announces the League will conduct a Home Tour in the spring and that general arrangements are under the supervision of Mrs. Holman Barnes and Mrs. Irving Smith.

Objective of the project is to acquaint the public with well designed homes and architects.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

HOUSEBUILDING IN TRANSITION. By Sherman J. Maisel. University of California Press, Berkeley 4, Calif. Price $5.00

Housebuilders will be forced to speed up their adoption of improvements and cost-saving methods even more rapidly than they have in the last five years, if they want to hold their markets in the face of increasing competition. The housing industry made rapid strides in the war years and the postwar period, according to the author's report which is based on case studies in the San Francisco Bay area.

Builders who produced 100 or more dwellings a year accounted for 35% of the total production; they developed new and more efficient methods of obtaining supplies and materials; they cut costs of selling; made savings in labor costs; reduced financing charges with the result that overall costs were 8% smaller than usual.

Although the author, Dr. Maisel, approaches the problems of housebuilding as an economist—he is Associate Professor of Business Administration at the University of California—he has combined engineering, statistical, and institutional material in this factual analysis of the trends in housebuilding and construction today. Architects, engineers, builders, public officials, in fact anyone interested in the subject of "housing" will be interested in reading this new book.

STATICS AND STRENGTH OF MATERIALS—An Integrated Presentation. By Roland H. Trathen. John Wiley & Sons, Inc., 440 4th Ave., New York 16. Price $7.50

The author, Roland H. Trathen, is Professor of Mechanics at Rensselaer Polytechnic Institute, presents an approach to the study of basic mechanics which recognizes that both mathematical and physical thinking are basic to mastery of the subject, and has written this book to meet the following four objectives:

To present the principles of statics and strength of materials and indicate the general methods of applying them to engineering problems;

To develop analytical ability by setting the engineering application in such a way that it presents a challenge in analysis;

To correlate previous experience in mathematics and physics with the discipline in mechanics; and

To develop an appreciation of mechanics as a science.

The author makes a definite attempt to utilize the mathematical knowledge the reader has acquired. Although principles are emphasized, the work recognizes the fact that both physical and mathematical thinking are basic to mastery of the subject. There are over 500 problems included in the book.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Machine and tool accessories. Now available a new catalog covering such items as "hand knobs," "handles," "jig and fixture components," and "master shank holders"; gives drawings of product, description, and dimensions—also price list. Available by writing DEPT-A&E, George F. Bub & Son, 7413 Lanier Drive, Cleveland 30, Ohio.

Hot water storage heater. A new 48-page catalog with description and pictures of complete line of P-K hot-water storage heaters; information on piping arrangements and installation data. Also average water requirements of typical hot water fixtures in various types of buildings; examples to show how requirements may be calculated, capacity requirements determined and heaters specified. Copy available by writing DEPT-A&E, The Patterson-Kelley Co, Inc, 619 Warren St, East Stroudsberg, Pa.

Building and home insulation. Four-page, illustrated folder (A.I.A. File No. 37-C-1) just released describing the new B-H spun blanket products. Feature is section on "How To Apply" mineral wool batts and blankets in structures which will be of interest to builders and contractors. Typical specification is shown as guide to architects. Brief descriptions on the features of this product include items of ease in handling, minimum waste of material in application, moisture resistance and fire resistance qualities. Thermal conductivity, density and vapor

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Threshold safety treads. A new 12-page catalog sectioned to show complete variety of treads and metal; full size cross-sections illustrated; safe groove and abrasive cast treads; extruded cast and abrasive thresholds and miscellaneous accessories such as plates, curb bars, window and elevator sills; complete explanatory installation sketches; an ideal file reference for designers, builders, architects, engineers, and users. Copies available DEPT-A&E, Wooster Products, Inc, Wooster, Ohio.

Woodwork in architecture. Architectural Woodwork Institute of America offers a continuing series of brochures for quick, easy reference when designing and specifying all types and applications of architectural woodwork (A.I.A. File No. 19-E, Millwork). Provides specifications, details and installation data on: exterior doors, exterior cornices, entrances, sash and windows, mouldings and interior trim, interior paneling, cabinet and casework, fixture work, interior doors, plywood applications, stairways, glue laminated units, bank and office woodwork, ecclesiastical work, wood species, wood control treatment and finishes on wood. Write DEPT-A&E, Architectural Woodwork Institute of America, 332 S. Michigan Ave, Chicago 4, Ill.

Coleman guide for home heating systems. A handy slide rule for estimating season operating costs of home cooling systems, enables the user to compute quickly and compare what the season's operating cost will be for any home in any part of the U. S., if equipped with any of four kinds of cooling systems; systems of waste-water condensers, cooling towers, evaporative condensers and air-cooled condensers. Booklet which lists utility rates in 98 cities is furnished with the slide rule. Copies of the Economy Guide are available to architects, engineers, contractors by writing DEPT-A&E, The Coleman Company, Inc, 250 North St. Francis Ave, Wichita, Kansas.

Automatic filters. A new 12-page illustrated bulletin describing Staynew automatic filters designed for large air volume and high efficiency; contains specifications, engineering and performance data covering automatic filters in a wide range of sizes, for any desired air capacity. Write DEPT-A&E, the Dollinger Corpn, 11 Centre Park, Rochester 3, N. Y., for free copy of Bulletin No. 500.

Stone Catalog in color. "A Catalog of Building Stones," 48 pages representing a comprehensive review of every important building stone quarried in the U. S., published in color. Detailed description, characteristics and sources for every stone; trade names, color classifications, company and quarry locations. Also includes data on characteristics of various building stones, limestone, sandstone, quartzite; classified according to cut stone, ashlar facing and flagstone. Copies available free to architects, engineers, builders, and contractors by writing (your letterhead) to DEPT-A&E, The Stone Council, c/o International Cut Stone Contractors & Quarrymen's Assn, Office of Secy, 5351 Winthrop Ave, Indianapolis, Ind.

Lightweight structural sections. A new 12-page catalog gives data on line of termite proof, non combustible lightsteel studs, joists and accessories. New designs, new sizes; to facilitate complete framing of residences, schools, hospitals, light commercial and industrial structures, exterior curtain wall framing in multiple story buildings and other structures in the field of light occupancy construction. Complete specifications, engineering data, and safe loads for all stud and joist sections; shows how wall panels can be shop assembled for easy and inexpensive erection at the site. For free copy write DEPT-A&E, Penn Metal Co, Inc, Parkersburg, West Virginia.

Overhead doors. Complete up-to-date information on industrial, commercial, and residential overhead-type doors summarized in new 16-page guide. Well illustrated, complete specifications and instructions for preparation of building openings and installation of all models. Typical examples of special installations, where building conditions do not permit use of standard equipment. For free copy write DEPT-A&E, Barber-Colman Co, Rockford, Ill.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$12.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—
Common (all brands, paper sacks),
Per Sack, small quantity (paper) $1.05
Carload lots, in bulk, per bbl.) 3.55
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount 2% on L.C.L.
Trinity White, Medusa White { 1 to 100 sacks, $3.50 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 4-yd. loads:

Per cubic yard, 1-8 Mix	$ 9.80
1-7 Mix	10.15
1-6 Mix	10.70
1-5 Mix	11.40
Curing Compound, clear, drums, per gal.	1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .19	$ .19
6x8x16-inches, each	.23	.235
8x8x16-inches, each	.27	.27
12x8x16-inches, each	.38	.40
12x8x24-inches, each	....	.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd	$7.75
⅜-inch to ⅛-inch, per cu. yd	7.75
No. 6 to 0-inch, per cu. yd	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
25/32 x 2¼	390.00	381.00
25/32 x 2¾	375.00	355.00
25/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

25/32 x 2¼ First Grade	$390.00
25/32 x 2¼ 2nd Grade	365.00
25/32 x 2¼ 2nd & Btr. Grade	375.00
25/32 x 2¼ 3rd Grade	240.00
25/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
25/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 219.00
¾-inch, per M sq. ft. 292.00
Plyscord ..... 11½c per ft.
Plyform ..... 25c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $43.50
Standard Ribbed, ditto $47.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Raw	Wholesale Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $13.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.

Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.25
Vented hip skylights, per sq. ft. 2.25
Aluminum, puttyless,
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$290 per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.20 to $1.60 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.35 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $1.65 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ 65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red	$ .40	$ .36
12 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00

Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 5: 525 Market St., SU 1-6747
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 5: 525 Market St., SU 1-6747
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 522 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
W. P. FULLER CO.
Seattle, Tacoma, Portland
NICOLAI DOOR SALES CO.
San Francisco: 3045 19th St.
F. M. COBB CO.
Los Angeles & San Diego
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
HOUSTON SASH & DOOR
Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 5: 525 Market St., SU 1-6747
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building.
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 333 Montgomery St., DO 2-3883
Los Angeles 13: 601 West Fifth St., MI 6294

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT & HILP
San Francisco: 918 Harrison St., DO 2-0700
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES
(ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

ELEMENTARY SCHOOL, Bakersfield, Kern county. Bakersfield Elementary School District, Bakersfield, owner. 15-classrooms, 2-kindergartens, administration, multipurpose, kitchen, 10-special therapy rooms, toilet rooms; 1-story, 49,039 sq. ft. in area, frame and stucco construction, steel sash, plywood partitions, concrete floors, radiant heating, tile floors—$599,599. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: A. C. King, Inc, Fresno.

MEMORIAL LIBRARY, Los Angeles. Los Angeles Jewish Council, owner. Reinforced brick construction, 4000 sq. ft. in area; gravel roof, concrete slab and asphalt tile floors, acoustical tile ceilings, 2-forced air units, plumbing, electrical work, concrete terrace, aluminum sash. ARCHITECT: Albert Criz, Los Angeles. GENERAL CONTRACTOR: Choliner & Gumbiner, Inc, Los Angeles.

COFFEE SHOP REMODEL. San Francisco. Mannings, Inc, San Francisco, owner. Remodel interior and construct new store front—$100,000. ARCHITECT: Wm McCormick, San Francisco. GENERAL CONTRACTOR: Dinwiddie Construction Co, San Francisco.

NEW COURT HOUSE, Pocatello, Idaho. Board of Commissioners of Bannock County, Pocatello, owner. Reinforced concrete courthouse and jail, 204x47 ft. and 47x150 ft. in area—$645,900. ARCHITECT: Cedric M. Allen and Ray S. Hunter, Pocatello. GENERAL CONTRACTOR: C. H. Elle Construction Company, Pocatello.

STORE BLDG, Las Vegas, Nevada. Albert Shore, Las Vegas, owner. Three-store, concrete block, built-up roof, asphalt tile, gas unit heating, insulation, plate glass — $10,500. ARCHITECT: Ray W. Baldwin, Las Vegas. GENERAL CONTRACTOR: Jim Nelson, Las Vegas.

ELEMENTARY SCHOOL, Mt. View, Santa Clara county. Mt. View Elementary School District, Mt. View, owner. Six classrooms, administration, 2-kindergartens, toilet rooms; frame and stucco construction—$149,973. ARCHITECT: Clark & Stromquist, Palo Alto. GENERAL CONTRACTOR: Aiken Construction Co, San Jose.

SHOPPING CENTER. La Habra, Los Angeles county. George Shapiro, La Habra, owner. Reinforced brick store building 105x100 ft. in area; tapered steel girders, composition roofing, concrete slab, steel sash and doors, plaster walls, acoustic tile ceilings, porcelain enamel front, aluminum entrance, toilets, electrical work, concrete loading dock, asphaltic concrete paving. ENGI-

NEER: George V. Novikoff, Hawthorne. GENERAL CONTRACTOR: Co-Ordinated Contractors, Inc, Hawthorne.

TELEPHONE BLDG. El Centro. Pacific Telephone & Telegraph Co, El Centro, owner. Two-story reinforced concrete — $600,000. ARCHITECT: Allison & Rible, Los Angeles. GENERAL CONTRACTOR: Louis C. Dunn Company, Los Angeles.

REMODEL ELEMENTARY SCHOOL. Bakersfield, Kern county. Bakersfield Elementary School District, Bakersfield, owner. Add 10 classrooms, 1 special room, toilet rooms, and reconstruct existing classrooms; 15,522 sq. ft. of area; frame and stucco construction, steel sash — $222,209. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: Forrest Frasier, Bakersfield.

NORTH VALLEY HIGH SCHOOL. Albuquerque, New Mexico. Albuquerque Board of Education, Albuquerque, New Mexico, owner. Forty-five classrooms—$1,055,979. ARCHITECT: Louis Hesselden, Albuquerque. GENERAL CONTRACTOR: Lembke, Clough & King, Inc, Albuquerque, New Mexico.

WAREHOUSE. San Jose, Santa Clara county. Prune & Apricot Growers Ass'n, San Jose, owner. One-story, 180x240 ft. in area; reinforced concrete construction, wood roof trusses, wood roof. ENGINEER: Robert V. Letz, San Jose. GENERAL CONTRACTOR: Lew Jones Construction Co, San Jose.

HOSPITAL. Encino, Los Angeles county. Chaix General Hospital, Encino, owner. One-story masonry construction, 21,815 sq. ft. in area; reinforced concrete basement, wood frame roof and ceilings, composition roofing, wood and stud plaster partitions, concrete slab, plastic asphalt tile and conductive and non-conductive terrazzo floors and wainscoting, steel sash, hollow core birch doors, metal fire doors, 2-8 ton air conditioning units, 3-forced air units; emergency generator, oxygen system, vacuum system, central hot water boiler, water softener, steam boiler, plastic counter tops, tubular metal doors and frames, thermal and sound insulation, fire alarm, doctors in and out system, chain link fencing, asphalt

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	3.00	3.00	3.00	3.00	3.00
REINF. STREET	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

*6 Hour Day. **7 Hour Day. *** 8afore C.I.S.C for 15c increase.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

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paving, sheet metal—$305,000. ARCHITECT: Reiner C. Nielsen and Gene Moffatt, Los Angeles. GENERAL CONTRACTOR: Devon Construction Co, Los Angeles.

BOILER PLANT & INCINERATOR, Whipple, Arizona. Veterans Administration, Washington, D. C., owner. Work includes general roads, grading, drainage, plumbing, heating, ventilating, electrical work, outside services, demolition of existing boiler house —$433,000. GENERAL CONTRACTOR: Oakland Construction Co, Salt Lake City, Utah.

WAREHOUSE & OFFICE, San Francisco. Link Belt Co, San Francisco, owner. Three-story, 60x80 ft. in area, reinforced concrete construction, steel sash — $125,000. ENGINEER: M. P. Superak, Oakland. GENERAL CONTRACTOR: Auston Co., Oakland.

WALLBOARD PLANT, Seattle, Washington. Kaiser Gypsum Co, Seattle, owner. Eight buildings and facilities including conveyors, oil storage and ship unloading docks; construction will include wallboard plant, machine shop, warehouse, change house, boiler house, office building, $1,709,762. ENGINEERS: Kaiser Engineers, Seattle. GENERAL CONTRACTOR: J. C. Boespflug Const Co, Seattle.

MFG PLANT, Santa Cruz. Commercial Wire Products Co, Rockford, Ill, owner. One building 60x200 ft.; one building 40x60 ft., structural steel frame, corrugated galvanized steel exteriors, steel sash, concrete floor, $60,000. GENERAL CONTRACTOR: K. J. McGranahan, Santa Cruz.

CARTON FACTORY, WAREHOUSE & OFFICE BLDG, Salinas, Monterey county. Growers Container Corpn, Salinas, owner. One story building of 110,000 sq. ft. may be augmented by another 30,000 sq. ft. building; reinforced concrete, tilt-up construction, wood roof, $700,000. GENERAL CONTRACTOR: Barnhart Const Co, Santa Clara.

SHOP BLDG, Edison High School, Fresno county. Fresno Unified School District, Fresno, owner. Structural steel frame, steel panels, aluminum roof, concrete floor, radiant heating, 22,000 sq. ft. of floor space, $193,990. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Harris Const Co, Fresno.

TEACHERS' RESIDENCES, Canuta Creek, Fresno county. Canuta Elementary School District, Canuta Creek, owner. Construction of ten residences for teachers, $102,700. ARCHITECT: William Hastrup, Fresno. GENERAL CONTRACTOR: R. T. Dealy, Avenal.

HIGH SCHOOL ADDITION, Centerville, Alameda county. Washington Union High School District, Centerville, owner. Twelve classrooms, home making, arts & crafts, girls' gymnasium, shops, music room and addition to cafeteria, $991,000. ARCHITECT: Falk & Booth, San Francisco. GENERAL CONTRACTOR: Dogdanich Const Co, Santa Clara.

EUREKA INN ADD'N, Eureka, Humboldt county. Eureka Inn, Eureka, owner. Addition to dining room, cocktail lounge remodel; 1-story light steel frame, wood exterior, $89,550. ARCHITECT: Ernest F. Winkler, San Francisco. GENERAL CONTRACTOR: Ole Antensen, Eureka.

INDUSTRIAL PLANT, Orange county. U. S. Electrical Motors Co, owner. Reinforced brick and tilt-up construction, composition roofing, steel frame, steel sash, concrete floor, painting, plumbing, electrical work, unit space heaters, paving, fencing, site work, 125,000 sq. ft. of floor space. GENERAL CONTRACTOR: J. A. McNeil Co, Inc, Alhambra.

SEWAGE PUMPING STATION, Milpitas, Santa Clara county. County Board of Supervisors, Santa Clara county, San Jose, owner. Reinforced concrete construction; 7,000,000 gals per day capacity, $45,544. ENGINEER: Mark Thomas, San Jose. GENERAL CONTRACTOR: W. H. Nicholson Co, Santa Clara.

OFFICE, WAREHOUSE & SHOP, San Leandro, Alameda county. Western Electric Co, Emeryville, owner. One and part 2-story reinforced concrete and structural steel building, $4,000,000. ARCHITECT (Cons.) Thomson & Wilson, San Francisco. STRUCTURAL ENGINEER: H. J. Brunnier, San Francisco. GENERAL CONTRACTOR: Swinerton & Walberg, Oakland.

PAROCHIAL SCHOOL ADD'N, Eureka, Humboldt county. Roman Catholic Diocese of Sacramento, Sacramento, owner. One and two story, reinforced concrete addition to the existing school for classroom use, $175,213. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Ralph Larsen & Son, San Francisco.

CHURCH AUDITORIUM, South Gate, Los Angeles county. Grace Bible Church, South Gate, owner. One story, frame and stucco auditorium to seat 300 people; forced air heating, concrete slab floor, composition roofing, interior wood paneling. ARCHITECTS: Hans Wallner, Huntington Park, and Paul Duncan, Sherman Oaks. STRUCTURAL ENGINEER: W. M. Bostock, Huntington Park. GENERAL CONTRACTOR: F. E. Underwood, San Gabriel.

FOOD PROCESSING BLDG, San Jose, Santa Clara county. Pict-Sweet Foods, Inc, Mt. Vernon, Washington, owner. One story, 82,000 sq. ft. of area; reinforced concrete, tilt-up construction, wood roof, wood trusses, $221,000. STRUCTURAL ENGINEER: James M. Smith, San Francisco. GENERAL CONTRACTOR: Carl N. Swenson, San Jose.

SCHOOL ADMINISTRATION BLDG, Calexico, Imperial county. Calexico Elementary School District, Calexico, owner. Central administration building on existing high school campus, $39,884. CONSULTING ENGINEERS: Bowen, Rule & Bowen, Los Angeles. GENERAL CONTRACTOR: Imperial Construction Co, Calexico.

OFFICE & LODGE BLDG, Gilroy, Santa Clara county. Odd Fellows Hall Ass'n, Gilroy, owner. Two story, reinforced concrete and frame building to contain 12,000 sq. ft.; office on 1st floor, Lodge on 2nd floor, $98,825. ARCHITECT: O. B. Christensen, Santa Clara. GENERAL CONTRACTOR: Wm. Radtke & Son, Gilroy.

COLD STORAGE BLDG, Claremont, Los Angeles county. Union Ice Co, Claremont, owner. Concrete block walls, tapered steel beams, composition roofing, slab floor, insulation, storage doors, 7800 sq. ft. floor space, $50,186. ENGINEER: Chas. E. Stickney, Los Angeles. GENERAL CONTRACTOR: Bibb, Remmen & Bibb, Glendale.

WESTERN ADD'N HOUSING PROJECT, San Francisco. Housing Authority of City & county of San Francisco, owner. Five 11-story, one 6-story, reinforced concrete construction, 12 elevators; and seven 3-story frame and stucco buildings; comprising 608 residential units, $5,302,175. ARCHITECT: Spencer & Ambrose, San Francisco. GENERAL CONTRACTOR: Theo. G. Meyer & Sons, San Francisco.

MEDICAL BLDG, Weaverville, Trinity county. Owner c/o architect. One-story frame with redwood exterior, aluminum sash, asphalt tile floors—$25,000. ARCHITECT: Albert W. Kahl, San Mateo. GENERAL CONTRACTOR: Don P. Creath, Weaverville.

ELEMENTARY SCHOOL ADD'N, Delano, Kern county. Delano Elementary School District, Delano, owner. 11-classrooms, kindergarten, kitchen, multi-purpose, toilet rooms; frame and stucco, steel sash, plywood partitions, concrete floors, insulation, radiant

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heating, asphalt tile floors—$287,522. ARCHITECT: Wright, Metcalf & Parsons, Bakersfield. GENERAL CONTRACTOR: Clarence Ward Construction, Fresno.

SHOPPING CENTER. Hawthorne, Los Angeles county. Romill Development Co, Hawthorne, owner. 11-acre site, 150,000 sq. ft. area, retail stores; reinforced brick wall construction, composition roofing, slab and terrazzo floors, acoustical work, plastering, structural steel, metal sash, air conditioning, plate glass, sheet metal, paving, flood lighting. ENGINEER: George V. Novikoff, Los Angeles. GENERAL CONTRACTOR: Hahn-St. John, Hawthorne.

DENTAL BLDG. San Mateo. Three suites of offices; frame and stucco construction, brick and veneer, aluminum sash, asphalt tile floors — $40,000. ARCHITECT: Sharps & Brown, San Mateo. GENERAL CONTRACTOR· Chas. J. Pedersen, Inc, San Mateo.

IN THE NEWS

AID FUNDS GRANTED FOR COUNTY HOSPITAL

Federal Aid Grant funds of $186,055, together with local funds totaling some $558,166, have been made available to the County of Humboldt (Calif.) for construction of a new TB Hospital Building in Eureka.

The new facilities will provide for 50 beds.

NEW HIGH SCHOOL BUILDING

The architectural firm of Clark & Stromquist, Palo Alto, have completed studies for the Campbell Union High School District relative to the construction of a new High School Building in Campbell.

Estimated cost of the project is $2,000,000.

COURT HOUSE FOR VISALIA

Architects Horn and Mortland of Fresno are preparing drawings for the construction of a new Court House building in Visalia for the Tulare County Board of Supervisors.

The 3-story building will have a structural steel frame, reinforced concrete and reinforced brick, porcelain enamel panels, and complete air conditioning.

Estimated cost of the work is $2,520,000. A State loan grant of $750,000 has been approved.

NAMED FRESNO DISTRIBUTOR

Joe Marsalisi, Jr. and Jack O'Gorman, operators of Amana-San Joaquin in Fresno, Calif., have been appointed distributor for the Chambers of Indianapolis range firm.

The territory to be served by the new firm includes Fresno and six surrounding counties.

ENGINEER MAKES NATIONAL STUDY

Donald M. May, consulting Electrical Engineer of Los Angeles, is privately conducting a national survey among two hundred of the larger cities throughout the nation to compile factual statistics on the following:

1. Under what various conditions are engineered electrical plans required for construction, and 2) What signature is required on the electrically engineered plans, if any.

Questionnaires have been sent and the results will be compiled and announced at a fall meeting of the Los Angeles City Electrical Code Committee.

ROYAL NEVADA HOTEL IS PLANNED FOR LAS VEGAS

John Replogle, structural engineer of Las Vegas, and architect Paul R. Williams of Los Angeles, are preparing plans for the new Royal Nevada Hotel to be built north of the Last Frontier Hotel in Las Vegas.

The new hotel will have 237 hotel rooms, 12 master suites, dining room, kitchen, bars, casino of 6,000 sq. ft., swimming pool, cabanas and parking for 600 automobiles.

NEW CITY LIBRARY

Architect John Badgley of San Luis Obispo is completing plans for the construction by the City of San Luis Obispo of a new City Library at Palm and Morro Streets.

The building will be 80x120 ft., 1-story, and will cost an estimated $100,000.

TRUCK TERMINAL

Pacific Freight Lines, Inc, have acquired a site in Fresno and will soon construct a modern truck terminal, according to a recent announcement. Estimated cost of the project is $200,000.

ARCHITECTURAL FIRMS MERGE

Formation of an association between Angus McSweeney of San Francisco and Jay Dewey Harnish of Ontario, California, was announced recently.

The combined forces of the two architectural organizations will include a staff of fifty-six specialists experienced in all phases of architecture from site planning to supervision.

McSweeney is recognized in the field of large scale housing developments, while Harnish is a specialist in the design of modern hospitals.

ADDITION TO HOSPITAL

Architects Zick & Sharp, Las Vegas, Nevada, are preparing working drawings for the construction of an addition to the Southern Nevada Memorial Hospital in Las Vegas.

U. S. STEEL PROMOTES FRANK A. BURNS

Appointment of Frank A. Burns as Public Relations Representative at U. S. Steel Corpn's new Fairless Works, Morrisville, Pa., has been announced by J. Carlisle

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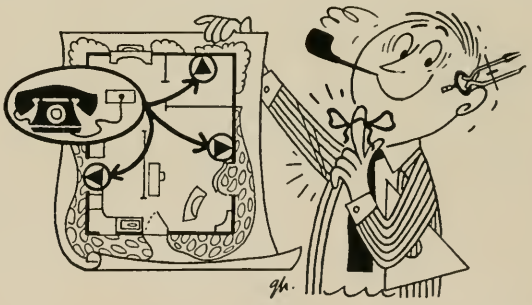

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MacDonald, Assistant to the Chairman of the Board.

At the same time it was announced that Joseph H. Jordan, Director of Public Relations for U. S. Steel's Northwest District, would be transferred as Director of the Pacific-Southwest District with headquarters in Los Angeles.

SISALKRAFT MERGING WITH MANUFACTURING DIVISION

The Sisalkraft Company announces a merger with its manufacturing division, The American Reenforced Paper Company, according to W. N. Stevenson, president.

The organization will be renamed American Sisalkraft Corpn and will continue the manufacture of waterproof papers, insulation and box tape products.

Regional sales offices will remain in Chicago, New York and San Francisco, with general offices at the plant in Attleboro, Mass.

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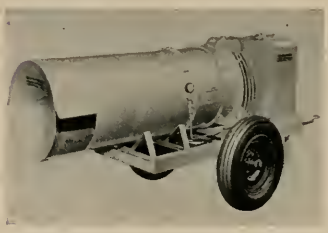
DRYING AND CURING CONCRETE HEATER

A new, large, mobile heater for drying and curing concrete, cement, plastering, masonry and paint; designed for heavy out-of-door use on highways, concrete ditches, culverts and foundation work.



The Bes.D.Froster is a blower type heater with acial fan, powered by gasoline engine or electric motor; rapidly heats and distributes warm air in a controlled pattern without creating "hot spots"; requires no preheating; capable of producing 1 to 4-million BTU per hr.; easily maneuvered from place to place; can be towed by car or truck from place to place. Manufactured by Besler Corpn, Oakland, California.

ARCHITECT SELECTED

Architect Ernest F. Winkler, San Francisco, has been commissioned by the Humboldt County Board of Supervisors to draft plans and specifications for the construction of a 50-bed tuberculosis hospital building in Eureka.

Cost of the 2-story, basement, reinforced concrete building is estimated at $186,055.

JAMES E. PETERSON NAMED ENGINEER

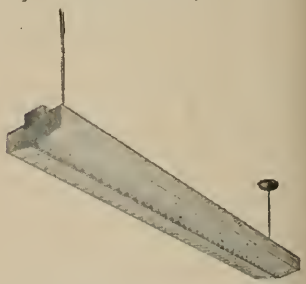
James E. Peterson has been named Director of Engineering for General Paint Corpn, according to an announcement by R. B. Robinette, president.

Peterson, for the past three years head of his own firm of consulting engineers in Los Angeles and specializing in industrial architectural and engineering design, will be in charge of the company's real estate and other physical facilities in Spokane, Seattle, Portland, San Francisco, Los Angeles, Tulsa, Oklahoma, and Cleveland, Ohio.

NEW LUMINAIRE IN BRASS

The "Cavalier" features full length luminaous side panels with no opaque metal framing. Side panels are supported internally by a steel frame.

Unit provides low surface brightness abave specified 45 degree shielding angle. Uniform low brightness over entire luminaire obtained by finish on louvers, side reflectors and channels. Plastic side panel gauged to 100 foot lamberts.



Meets Recommended Practice of School Lighting. Available in 4 or 8 ft. lengths; rapid or instant start lamps, adjustable ceiling strap; hook-on stem assembly. Manufactured by F. W. Wakefield Brass Company.

OFFICE BUILDING

Architects Max Flatow and Jason Moore of Albuquerque, New Mexico, have been commissioned to prepare plans for the construction of an office building in Albuquerque for the Albuquerque Federal Savings and Loan Association.

Cost of the 4-story, and basement, mason-

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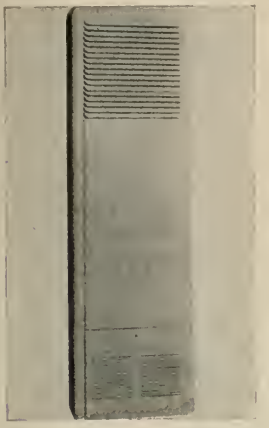


Panel sets above baseboard to allow wall to wall floor covering; comes in beautiful new zolotone finish and harmonizing colors of light gray, dark gray, tan, and forest green. Available in single and dual models; sizes from 25,000 to 60,000 BTU gas; ten year factory guarantee against burn-out and rust-out. Manufactured by Royal Jet, Inc, 1024 Westminster Ave, Alhambra, Calif.

EVENING CLASSES AT BERKELEY

Four University of California Extension evening courses in engineering, in San Francisco, Oakland and Berkeley, will be of particular interest to architects:

"Analysis of Indeterminate Structures" started the first of group of 15 two-hour weekly meetings on February 15th, UC Berkeley campus.

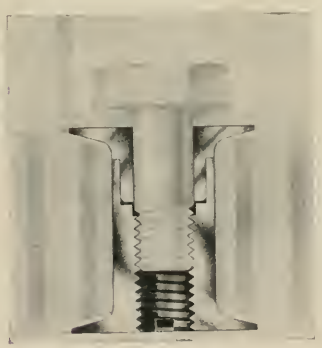
"Modern Structural Materials" began a 15 two-hour weekly session series on February 19th at UC Extension Center, San Francisco

"Review of Structural Design for Architects" will hold the first of a group of 12 two-and-a-half-hour meetings in the UC Extension Center in Oakland on February 23.

"Review of Civil Engineering" will hold the first of a 12 two-and-a-half hour meetings on March 1, at the UC extension Center in San Francisco.

NEW FASCO SPACER

The new Fasco Threaded Spacer for sandwich type structure fastening has a unique feature of a tapped sleeve which receives the attaching bolt and eliminates the need for a nut. This results in considerable weight saving per fastener, faster and more convenient installation.



It provides a means of attaching conduits, cables, instruments and other equipment without danger of crushing panels;

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ARCHITECT SELECTED

Architect J. Clarence Felciano, Santa Rosa, has been commissioned by the Calpela Elementary School District, near Ukiah, California, to draw plans and specifications for the construction of a new Elementary School.

The new building will be of frame and stucco construction.

NEW HAND KNOBS

Announcement of a new Hand Knob to the line of hand knobs, hand wheels, handles, jig and fixture components, and master shank holders, has been announced by the George F. Bub & Son Company, 7413 Lanier Drive, Cleveland, Ohio.

Available in high quality grey iron, and steel, with extremely smooth finish and in a variety of contours "to fit the hand." The hand knobs are also now available in aluminum.

RICHARD S. SMITH SOLA ELECTRIC REP

Richard S. Smith has been named District Sales Engineer in charge of new offices being opened by the Sola Electric Company in Los Angeles, according to an announcement by L. C. Marschall, executive vice-president of the Chicago specialty transformer manufacturing firm.

Prior to his new duties, Smith served as Ohio District Sales Engineer. He was graduated from the University of Wisconsin in electrical engineering.

BASEBALL GRANDSTAND

The City of Salinas has authorized the architectural firm of Butner, Holm & Waterman, Salinas, to prepare drawings for the construction of a grandstand addition at the Salinas Rodeo Grounds.

The addition will be used in conjunction with the baseball diamond, and will cost an estimated $30,000.

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☐ **Check contents** and locations of first-aid kits. Be sure they're adequate and up to date. Here again, your CD Director can help—with advice on supplies needed for injuries due to blast, radiation, etc.

☐ **Encourage personnel** to attend Red Cross First Aid Training Courses.

☐ **Encourage your staff** and your community to have their homes prepared. Run ads in your plant paper, in local newspapers, over TV and radio, on bulletin boards. Your CD Director can show you ads that you can sponsor locally. Set the standard of preparedness in your plant city. There's no better way of building prestige and good employee relations—and no greater way of helping America.

Act now . . . check off these four simple points . . . before it's too late.

Architect Harold W. Burton used custom-made Ceramic Veneer to achieve this handsome entrance to the Church of Jesus Christ of Latter-Day Saints in West Los Angeles. The textured C. V. squares were fired with a gold overlay. This material (shown in detail above) was combined with harmonizing green veneer.

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Portland Seattle Spokane

This smaller bath is equally luxurious. The decorative tile, one of many new designs in the Hermosa line, is keyed to rich, warm color.

Colorful tiles at right, Scotch Mist Gray (BH-183), Golden Yellow (BH-186), and Pink Dust (BH-187), were used to create the kitchen and bathrooms pictured on this page. Decorative tiles shown were created expressly for provincial homes.

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COVER PICTURE

A NEW LOOK
IN RESIDENTIAL
CEILINGS

Residence designed for C. Dockery, Jr. of Greensboro, N. C., shows use of modern construction materials to accomplish today's architectural design.

PHOTO Courtesy Associated Plywood Mills, Eugene, Oregon

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. EDITORIAL NOTES .

A STUDY OF EDUCATION

The National Association of Manufacturers has released the findings of a special committee of educators and industrialists who made a two-year study of major controversial issues concerning education in the United States.

The study covered such vigorously debated subjects as the basic purposes of education, the rights of teachers, objective teaching vs. indoctrination, academic freedom, and the investigation of charges against schools and educators.

Conclusions were reported in eleven broad "areas of agreement" under the general heading, "This we believe about education."

"Businessmen, the public, and educators," the study says, "should view with proper and customary caution sweeping charges made by any group which studies the educational system and publishes adverse findings as to its methods, purposes, or practices, or as to the ideological loyalties of some of its leaders.

"But smearing the groups or the individuals responsible for such criticism is not satisfactory refutation of their evidence or of their arguments. Charges which cannot be substantiated should be refuted."

Of community vs. government responsibility for education, the report says, "Constitutionally, public education is a function of the several states and statewide legislation establishing minimum standards of attendance, minimum educational standards, requirements for facilities, and the pattern of local administration within certain limits of authority and responsibility is necessary and proper.

"But community responsibility, community administration, and community determination of matters concerning local school systems should not be weakened by centralization of either facilities or control beyond actual requirements for the most efficient and economical educational services in a given area. A thousand errors of policy or practice, however gross some of these errors may be, all tend to cancel each other out in time; and America has gained tremendously by this right of small groups to make progress in all fields of social effort by separate methods of trial and error."

In conclusion the report says, "It is hoped that this effort will be received by both industrialists and educators in the spirit of tolerant good will in which it was conceived and in which it was conscientiously prepared," but it is "not presented as an official policy position of any educational, business, or industrial association," and is published "as a public service in the interest of greater education-industry cooperation."

"This We Believe About Education"—well worth getting a copy and reading.

* * *

Gross revenues derived from the 6c California tax on gasoline for the month of August amounted to $22,287,164, an increase of 37.8 percent over a year ago. Taxes were raised July 1st.

* * *

BUILDERS SUPPORT NATIONAL HOUSING CONSTRUCTION PLAN

Legislation that has been introduced in Congress to carry out President Eisenhower's housing recommendations merit the thoughtful consideration of every individual concerned with the enormously complex housing problems that confront the nation. The National Association of Home Builders, representing the private home constructors throughout the nation, is in accord with the main principles and objectives of the proposed legislation, although officials of the organization believe some changes are essential to the achievement of the President's goals.

The proposal for re-establishment of a secondary mortgage reserve facility, for example, would appear to be ineffective in its present form, but home building officials are confident the proposed legislation can be amended to provide for the even flow of mortgage credit that is essential to a stable housing market.

Revision of the nation's basic housing laws is long overdue. Since 1934, when Congress passed the law creating the Federal Housing Administration, numerous amendments and additions have been made, but they have fallen far short of what is needed. Mortgage market machinery and down payment schedules established in the 1930's are totally inadequate to meet the needs of today's mass market.

The proposed legislation is intended to modernize our housing laws: to extend home ownership to the great mass of middle and low income families on terms they can afford; to reinvigorate the drive to eliminate slums, and to pave the way for the ultimate but gradual withdrawal of Government from the housing business.

President Eisenhower's recommendations affirm the need for positive Government leadership in a field which vitally affects the public interest. But they also recognize that the ultimate responsibility for housing the American people must rest with private enterprise.

The home building industry remains firmly opposed to public housing. So, it is up to Congress to determine whether and to what extent public housing construction shall be continued.

The nation's housing industry is one of the strongest bulwarks against economic recession. It contributes about 12-billion dollars annually in new home construction to the real wealth of the nation and provides employment directly for more than one million construction workers and indirectly for hundreds of thousands in allied fields.

It is to be hoped that the Congress will pass this proposed legislation as promptly as is consistent with careful consideration of its merits.

Control Tower KINGSFORD-SMITH Airport At Mascot

REMODELING AUSTRALIA'S MAJOR INTERNATIONAL AIRPORT

By PETER DAVIDSON

In these days of mighty machinery and skilled engineering, nature is not the adversary she was when man decides to alter the face of mother Earth. To modernize Australia's Kingsford-Smith Airport, the contrary dame is being pushed around—rivers are being moved and sand from the bed of a bay is being disgorged back on to the shore from where it was blown.

To make the airport one of the most modern in the Southern Hemisphere, nature is being made to move over.

Plans to remodel the airport include the construction of two runways with parallel taxi-ways, new overseas and interstate terminal buildings, new hangars and possibly a flying boat base. While all this is in progress Kingsford-Smith continues to operate as the busiest airport in Australia.

The first stage of the project is nearing completion. An 8,000-foot runway and taxi-way will be ready for traffic in March 1954, and the construction of the second runway is in progress.

The airport in Sydney is named after one of Australia's most famous airmen, Sir Charles Kingsford-Smith, who made many epic trans-world flights in the 1920's and early 1930's before he was lost on a flight from England to Australia in 1935. His famous plane, the Southern Cross, in which he made the first flight across the Pacific from Oakland, California, to Sydney in 1928, is stored in a hangar at the airport. When the new Kingsford-Smith airport is completed it will be placed in the main foyer of the international terminal building.

Kingsford-Smith airport is one of the world's busiest.

DIAGRAM of Stage 1 of the proposed reorrangement of runways.

INTERNATIONAL AIRPORT . . .

It is the terminal of seven international airlines—British Overseas Airways Corporation (B.O.A.C.), Qantas Empire Airways (Q.E.A.), British Commonwealth Pacific Airlines (B.C.P.A.), Air Ceylon, Pan American Airways (P.A.A.), Royal Dutch Airlines (K.L.M.) and Canadian Pacific Airlines (C.P.A.L.). In addition seven interstate airlines are based on Kingsford-Smith, plus several interstate airlines and charter flying organizations.

The daily average of transport aircraft movements is 143—52,118 annually. Almost 1,000,000 passengers take off and land each year, and more than 60 tons of freight is handled daily. Kingsford-Smith can handle this enormous volume of traffic quite comfortably today—but fast-flying jet aircraft and the increase in passenger traffic make it essential to plan far ahead.

For this reason engineers of the Department of Civil Aviation, led by Dr. Keith Bradfield, a son of the designer of Sydney's famous Harbour Bridge, made a thorough examination of Sydney's immediate and future airport requirements during World War II. They then made a survey of all areas within 30 miles of Sydney for a suitable alternative to the old aerodrome at Mascot. But like many others before them, they found that Kingsford-Smith was nearer Sydney (six and a half miles) than its nearest rival (Bankstown, a small suburban airport used by light planes); that nearby Botany Bay was the only suitable site for a flying boat base capable of handling the huge flying boats being built overseas; that the existing workshops, hangars and stores, worth at least £A500,000, could be used as workshops and, most important of all, that the air approaches to the airport fulfilled the exacting requirements of the International Civil Aviation Organization (I.C.A.O.), requiring an unrestricted view and maximum clearance of natural and artificial obstacles for approach, landing and take-off.

These and other factors decided the engineers that, if Kingsford-Smith were suitably remodelled it would fulfill Sydney's airport requirements for many years to come. Immediately they began planning for an airport that would be able to handle more than twice the number of aircraft handled today and have made provision in the plan, using double taxiways, to increase this maximum.

Under the new plan the outlet to Cook's River is being shifted to make room for a new runway, and the new terminal buildings will be built facing the shores of Botany Bay, a few yards from the Mill and Engine Pond which provided Sydney with its first piped water supply.

Before the work of remodelling Kingsford-Smith Airport began, the aerodrome was bounded on the western side by Alexandra Canal—a storm-water canal emptying into Cook's River—on the north side by the suburbs of Mascot and Botany, and in the south Cook's River wound its way eastward a few yards from the southern end of the main north-south runway, turned north, and running parallel with the shores of Botany Bay, formed the eastern boundary of the airport, before finally swinging around a sharp bend and flowing eastward into the bay. It is this northern and eastern arm of the river which has been diverted and a new outlet made on the southern side of the airport, making a large area of land available which the river previously divided on its northward flow.

A large loop of the river on the southwestern side of the old north-south runway is being "short circuited" by making a new cut joining the two ends of the loop, so making a more direct route for the river to the bay. This second diversion is making room for the 6,000 foot long, 164 degree adverse weather runway which will cross the 74 degree runway almost at right angles.

When the work began in December, 1948, one of the first jobs tackled was the cutting of the new outlet for the river. This cut was made at the southern end of the aerodrome and breached the river bank where it flowed past the end of the old north-south runway. The cut was 2,800 feet long, 500 feet wide and 13 feet deep at mean tide level; 2,000,000 cubic yards of soil were removed and used as filling to raise the level of parts of the airfield. When this cut was completed and the river was flowing on its new course work was begun on filling in the old bed of the river. To do this 2,500,000 cubic yards of sand were dredged from Botany Bay and another 1,000,000 cubic yards of sand were used to build up other low lying areas. Some idea of the enormous quantity of sand used in this particular part of the project can be had if one thinks of all this sand loaded into large lorries. Standing nose to tail, the lorries would reach for 2,500 miles.

Although 5,000,000 cubic yards of sand have been handled on the project, another 2,000,000 will be needed before work finishes.

Another formidable task was the rebuilding of sewer carriers and the building of aqueducts to carry them across the new outlet of Cook's River. The new pipes had to be connected without interruption to the service, a job that required considerable ingenuity. Also, because the pipes were above the ground, large areas of the new airfield had to be built up so that the sewer pipes would not be an obstruction.

Three 16-inch electric dredges were used to pump the sand from Botany Bay, and for making the new diversion cuts. In some sections delivery pipes from the dredges extended over 7,000 feet. In such cases a second dredge was used as a booster.

Botany Bay has very little shelter in stormy weather. On several occasions the dredge anchored off-shore received a severe buffeting during storms. Once the dredge was hit by a 70-mile-an-hour gust of wind during a cyclonic storm and it was blown on to the shore, at the same time wrecking the floating pipe line carrying the sand from dredge to shore.

When the old course of Cook's River had been filled in, work then began on the new main 64 degree runway which, for several thousand feet of its length, is built on top of the old filled-in river bed. One end of the runway now ends almost in the middle of the old Ascot race

(See page 36)

NEWS and COMMENT ON ART

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting the 12th Annual Pacific Coast Textile Exhibition (March 20-April 19) including "The Rotunda House of Six Rooms" incorporating original textiles in complete decorative settings.

Decorators from the City of Paris, San Francisco, Menlo, and San Mateo, have morked with one weaver each in developing a "lanai," a "living room," "dining room," a "man's library," "television room," and a "sitting room kitchen." Weavers working with the decorators include Siminoff, Lynn Alexander, Hilda Dial, Frances Morgan, Rosemary Antonazzi, and Mrs. Gregory Robinson.

CALIFORNIA MURALIST WINS NATIONAL ART RECOGNITION

Joseph L. Young of Los Angeles, one of the few practicing mosaic muralists on the West Coast, was one of seven outstanding American muralists selected recently in a nation-wide competition to submit designs for the completion of the Nebraska State Capitol building in Lincoln, Nebraska.

Young has won many major art awards throughout the country and recently returned from a year at the American Academy in Rome, Italy.

SAN FRANCISCO ART ASSOCIATION SHOW

Three artists, Walter Askin, Warrington Colescott, and Mera C. Hendel, are being presented in the second group show sponsored by the Artists' Council of the San Francisco Art Association at the M. H. deYoung Memorial Museum in Golden Gate Park, San Francisco.

The exhibition is one of a series featuring the works of artists chosen by lot from the artist members of the Association.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is offering the following schedule of exhibitions and special events during March.

EXHIBITIONS: Rental Gallery—Children's Paintings from 45 Countries; Textile Paintings by Woty Werner; 73rd Annual Painting and Sculpture Exhibition of the San Francisco Art Association. *Parkmerced Branch*—Special exhibition on Color.

Special Events will include Concerts, Folk Dance programs, Photochrome Club Exhibition, Lecture-Tours, Discussions on Art and related subjects, Motion Pictures, and Classes in Art for the Layman, Sketch Club and Children's Classes. Classes in Painting for Children have been opened at the Parkmerced Branch and are held each Saturday morning at 10 o'clock. Helen Van Cleave Park is also giving a series of lectures on "Home Decoration" at the Parkmerced Branch.

M. H. DE YOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, offers the following special Exhibitions and Events for March:

EXHIBITS—A group of Lillian Miller (1895-1943) Color Woodcuts, on loan by Mrs. Simon Bolivar Buckner; Recent Donations to the Museum; Fifth Annual Children's Art Show; Paintings and Drawings by Myra Albert Wiggins, a Retrospective Exhibition; Paintings by David Frield and Watercolors by William Fett.

An exhibition of Photographs by Peter Fink, taken during the photographer's travels through Europe, including Vienna, Zurich, Amsterdam, Milan, Rome and Paris, will be a feature of the month.

EVENTS—Classes in Art Enjoyment for the adult feature "Art and Ideas" a study of the changing picture of reality; Seminars in the history of Art; Painting workshop. For the Children, Miriam Lindstrom has arranged studies in Picture Making, Art and Nature, and the Children's Art Club for students 12 to 15 years old.

CALIFORNIA PALACE OF THE LEGION OF HONOR

Located in Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., the Museum will exhibit the noted collection of the late Albert D. Lasker for the benefit of the American Cancer Society through April 4. This collection includes sixty-seven masterpieces of French Painting of the late 19th and early 20th centuries. Other exhibitions will include: Paintings by Oskar Kokoschka, and American Paintings from the Museum's permanent collection.

Special events include motion picture series each Saturday afternoon at 2:30, Organ program each Saturday and Sunday at 3 p.m.; and painting classes for children on Saturday mornings.

PHILADELPHIA ART ALLIANCE

The Philadelphia Art Alliance, Pa., recently announced a schedule of special exhibitions for the Spring months. A wide variety of items and events are included.

CONSTRUCTION INDUSTRY PREDICTIONS— HIGHWAYS AND BUILDING

WILL RISE DURING 1954 HEAVY MAY DECLINE

AGC SURVEY

A heavy spurt in highway construction, a more moderate gain in building construction and a dip in heavy engineering projects are in store for the construction industry during the next six months according to a nationwide survey conducted by The Associated General Contractors of America.

Dominating this picture will be the ever-deepening competition. Although government and private sources forecast a 1954 volume only 2 to 4% less than the all-time high of $46.5 billion achieved last year, the capacity of the industry has expanded to greatly that competition seems bound to increase even if there is an expanding volume of construction.

The reasons for this are made clear in the replies to the survey, conducted among the 122 chapters and 82 national directors of the association which held its 35th annual convention in Los Angeles recently.

Contractors who expanded their organizations under the stimulus of war-time demands and during the unprecedentedly good years that followed are fighting to maintain their organizations on their present scale. Their ranks are swelled by new companies that came into existence during this period and are struggling to stay alive, the contractors reported.

Below Engineers' Estimates

With more contractors doing less work during the next six months it is just simple arithmetic that there will be less work per contractor. Possessed of greater capacity, most firms are ranging far and wide in their search for work. In many cases the lowness of bids, often below engineers' estimates, reflects simply a desire to keep up with a large overhead, it was reported in many cases.

Many replies to the survey state that the lowness of these out-of-state bids is due to a lack of knowledge of local conditions. A growing trend of small contractors to take on bigger jobs was also reported. Home builders, for instance, because of the decline in residential construction, are invading the commercial and heavy construction fields, and building contractors are also picking off heavy engineering projects, the replies stated.

Respondents to the survey said that contractors have not only increased their capacity but also their flexibility. All of it makes, they stated, for increased value to the buyer of construction and further sharpening of contractors' efficiency. The possibility that some will have to reduce the size of their organizations and others will fall by the wayside was seen in many of the replies.

It is a situation which is being carefully analyzed by the officers and members of the association, who engage in all types of construction, such as industrial, commercial, institutional and residential building; highway, street and airport construction and other types of earthmoving and paving operations; and heavy engineering work such as dams, waterworks and sewers, pipelines, dredging, canals, bridges and docks.

Highway Prospects Bright

The brighest spot on the industry's horizon is in the field of highway construction. Fully 46 percent of the replies in this category forecast an increase in this type of work during the next six months. Another 34 percent said highway construction would remain at the present level, making a total of 80 percent predicting an increase or the same high level.

Sixty-one percent of the respondents said building construction would be either greater or remain at the same high level. Those predicting an increase totaled 35 percent, those the existing volume, 41 percent. Thirty-nine percent saw a decline in this category of construction work between now and August.

In heavy construction the forecast for a decline was made by 54 percent of the respondents. Seventeen percent saw an increase ahead, and 29 percent looked for it to remain stable.

More School Construction

The strongest trend reported in the survey among specific types of projects was in school construction. Twenty-one percent said there would be more building of schools. Five percent reported that hospital construction would be increased; making the figure reporting greater institutional construction 30 percent when church and other institutional structures are included.

An increase in commercial building was forecast in 13 percent of the replies, and six percent saw a larger volume of industrial projects. In public construction, 16 percent saw a decline in the six-month period ahead while seven percent looked for an increase. Those predicting more private work amounted to four percent.

Regionally, the survey gave the following picture:

Far West—Heavy construction will be hard hit in this area, it was predicted by 75 percent of the replies from the states of California, Washington and Oregon and the territory of Alaska. One reply stated that the number of heavy contractors operating in the area had more than doubled since 1945.

An increase or the same high level of highway work was foretold in 77 percent of the replies, of which 53 percent were for an increase. Fourteen percent looked for an expanded building construction market and 43 percent for a stable market.

Rocky Mountain—Building and highway work to increase, with heavy construction to remain stable. A definite increase in school construction expected and a de-

(See page 33)

WORLD WIDE ARCHITECTURAL STYLES

POPULAR THROUGHOUT AUSTRALIA

GRAY SENIOR, *Architect*

Contemporary North American and European house designs are being adapted to Australian conditions with great success. Among the latest innovations is an unconventional split-level dwelling at Dee Why, a seaside suburb of Sydney. It is smaller than the average cottage but has 60 percent more living room.

For years Australian homebuilders have shown a conservativeness in their house designs in direct contrast to their traditionally informal way of living. The majority of homes are a mixture of an English cottage and a Californian bungalow. Since the war, however, there has been a demand for homes that are cheap yet provide more living space for a family and are more suited to the Australian climate and conditions.

Many have found the answer in contemporary North American and European designs. The costly terracotta tile roof, with its high pitch to make it weatherproof, is

Gray Senior's "split-level" home, Sydney, constructed of timber and brick with panoramic glass wall that faces garden—an example of contemporary North American and European design that has been adapted to Australian climate.

By cantilevering the gallery floor, more space is added to upper living area. Photo at left.

giving way to skillion roofs covered with asbestos cement sheeting, galvanized iron or aluminum sheets which need low pitch and use less timber. Glass walls and sun porches are taking the place of small windows and closed-in verandahs.

Mr. Gray Senior, Sydney architect, has adapted to local conditions an unusual home design which is already popular overseas and is creating much interest in Australia. The house, which has the outward appearance of a two-storey dwelling, employs the split-level principle of suspending a mezzanine floor or gallery between ground floor level and the roof. Although the average cottage of conventional design in Australia is rarely less than eight squares, the total ground floor area of Mr. Senior's home is only six squares, yet it has 60 percent more living area. Natural economies in the design reduce the cost by 25 percent over the conventional style.

In spite of its two-storey appearance, the split-level house is no higher than the orthodox home, with the quarter pitched roof. The space wasted by building on foundation walls and piers is saved by using a four inch concrete slab laid directly on the ground as a foundation.

The lower level of Mr. Senior's house contains a 24 ft. x 28 ft. living room with one all-glass wall facing the garden. Off this room is a large kitchen, bathroom and laundry. The mezzanine, which is reached by an open

Although this home has a smaller floor area than conventional Australian homes, it has 60% more living area.

The gallery bedrooms are screened from view by glazing the lower part of the ballustrade.

stairway at one end of the living room, contains two bedrooms 10 ft. x 8 ft. and 11 ft. x 8 ft. By cantilevering the floor of the gallery outside the house, space is provided for an open sundeck off one of the bedrooms.

By glazing the lower half of the ballustrade across the open part of the gallery, privacy for the bedrooms from the living area is ensured. Ceiling height under the gallery is 7 ft. 9 in. In the other half of the living room the ceiling follows the line of the roof, rising in the center to 16 ft.

Conventional ceilings are dispensed with. The two opposed skillion roofs are lined on the underside of the rafters. Clerestory windows at the junction of the two skillion roofs exhaust warm air at the highest point of the room.

There are many variations of the split-level design, depending upon the slope of the site. Mr. Senior's home is built on a level block. The entrance is through the living room. In the case of a sloping site, entrance can be made at gallery level.

One of the greatest attractions of the split-level design is its feeling of roominess. This is achieved by an almost complete lack of dividing partitions. The contrast of ceiling heights in the lower level divides the living room into two natural zones. In the gallery, built-in wardrobes divide the two bedrooms.

THE GALLERY is reached by these open stairs at one end of the living room. Fireplace chimney is an asbestos pipe fixed to the outside of the building.

Photo by Leonard Delano

Unusual effect obtoined in ground-floor office entrance of this Portland, Oregon, insurance firm, where firm initials become a part of the wall decorations.

INTERIORS

3-D PLYWOOD OFFERS LATEST INTERIOR DECOR

By ARTHUR W. PRIAULX

Architects are now able to offer three-dimension walls at a time when the motion picture industry is popularizing three-dimension entertainment.

A rather interesting and exciting new building material offered to the trade within the past year is a Douglas fir plywood which offers not only an actual three-dimensional wall, but combines some remarkable acoustical qualities as well.

Manufactured by the Associated Plywood Mills, Inc., of Eugene, Oregon, by a special process, this new plywood face offers an endless variety of opportunities to architects and designers who are looking for something com-

Attractive paneling was used in this modern office suite in Houston, Texas, with a most pleasing effect.

pletely different and off the beaten path.

In the manufacturing process, carefully selected flat-grained plywood panels are run through a special machine which eliminates all softwood growth, leaving only the hard winterwood. The effect is striking. The panel surface actually has depth—three dimensions. The natural grain of the wood stands out in base relief, forming pleasant swirls and contours. A good feature of this new material is its splinter-proof face, for all the loose softwood has been removed.

It is being made in both interior and exterior grades, so designers have a wide range of possible uses.

Probably one of its most satisfactory qualities is in the limitless ways in which it can be finished. This decorative plywood panel seems to take on extra depth when finished with only a clear wax, varnish or rez. Some interesting

Contrast can be obtained by using squares on one wall and full paneling on another in the same office, as has been done in this St. Louis, Missouri, office.

PHOTO'S BY ART COMMERCIAL STUDIO

Courtesy Associated Plywood Mills, Inc. Eugene, Oregon.

A luxurious effect is obtained in these offices (above) in Pasadena, California, where use of the 3-D effect Douglas Fir plywood panels complete a new and modern interior.

Random length panels have been used (below) with a pleasing and unusual effect in this Charlotte, North Carolina, office.

Still another example (above) of pleasing use of contrast with square checkboard wall facing a full panel installation in the First Trust Building, Pasadena, California.

Offices like these (below) in Charlotte, North Carolina, take on a living room atmosphere when finished with wood-grain paneling—much traffic noise is also eliminated by paneling.

effects have been obtained by applying enamel in any color and then wiping off all surplus before it dries. The same effect can be had with flat paints. It lends itself to bright colors, and some architects have had very pleasing results with pastel colors.

The paneling has been used for ceilings, walls, as louvres, built-in installations, wall and office furniture, for siding, doors, in churches and other structures where acoustical qualities are important. Some designers have achieved interesting results by using the material in offices and homes on furniture to match a wall made of the material. Some rather unique effects have been obtained by using it in checkerboard pattern on walls.

Another Portland, Oregon office where older building was remodeled — this office wall, with the built-in bookcase was developed with use of the paneling.

Here a Chicago, Ill., office has been completely refinished with plywood panel, even to built-in bookcase and desk front.

Decorative Douglas Fir plywood in 3-D effect installed in a private office.

When a tenant becomes tired of old walls and wants something different, designers have applied the material, as in one suite of offices in the First Trust Building at Pasadena (page 16, top), with pleasing and attractive results. Contrast was obtained in this installation by having one wall in vertical, full length panels with adjoining walls in checkerboard styling.

Architect Will I. Williams, used it in the $45,000 Emanuel Lutheran Church of Willamina, Oregon, with striking effect (see page 20). The walls of the nave were made up in parquet pattern, with square panels used with grain of adjoining panels at right angles. Excellent acoustical results have been realized, the church reports.

When the architects were looking for something entirely different for the Shrine Club in the Morrison Hotel in Chicago, they used the material for walls and counter front with exceptional results. This is another example of the use of this decorative panel in furniture or counter fixtures to match walls of the same material (see page 19, top).

Here the paneling has been used in decorating the interior of general offices—delightful result obtained by use of light green paint.

One Eugene, Oregon, home has the product installed as a ceiling in a bedroom where native softwoods have been used for walls and doors, with a distinctive informal atmosphere developed (see page 22, bottom). Still a different type of ceiling installation was tried at Greensboro, North Carolina, in the Claudinus Dockery Jr. home (see cover). The paneling was used on a sloping ceiling in the living room of this very lovely home. Whereas parquet panels were used on the Eugene home, a solid ceiling gives a rare tone to the Dockery home.

Being sliver-free, the panels fit in well as a material for furniture where people will be coming in touch with it. In the Jack Saltzman home in Portland, this new paneling was used for the walls in a boys room and to continue the sea-scape theme, the bunk beds were built of the same plywood facing (see page 22, top).

In nor a few cases, home owners report they are using this new decorarive material to change a room and in place of more conventional materials which have held

In the Morrison Hotel Shrine Club, Chicago, Ill., 3-D effect paneling was used with telling results for walls and center front.

The Wagonwheel Cafe at Chemult, Oregon, with its paneled walls fits into the woods theme of its forest surroundings.

sway for the past two decades. A room with all walls papered can be changed into a completely different room by installing on one or more walls. In these instances, best results are obtained by making the new walls full length from floor to ceiling. In a few cases it has been used as a wainscoting with good results.

In one Chicago office, this decorative panel was used to cover all walls and an extra bonus charm was added to the office by using it to cover a desk front and for a very effective bookcase built right onto a wall which was used for a new wall covering to change the character of an older office suite (see page 17, bottom).

A Portland insurance firm used the panels for a front entrance to their attractive ground-floor offices when they remodeled an older building and the effect is unusual (see page 12). In Charlotte, North Carolina, random lengths of panels were installed in one office with the grain parallel. Noise factor has been reduced sharply in offices where this new three-dimension wall material has been used, reports indicate (see page 16, bottom).

One feature liked by designers is the aged and antique effect which can be obtained by various finishings which accentuate the natural grain of the wood. Illustrating the flexibility of this material is the report from other users that the new, refreshing variety of potential finishes, from natural to bright colors, from solids to wipe-off, make it possible to fit this wall panel into almost any situation. Not only does it lend itself to ready use in new structures, but its range of tone, grain, pattern and color application makes it particularly attractive as a remodeling material.

It has the charm of freshness which fits well into modern decor. One clear wax finish gives the wall a deep patina, which creates a richness and dignity usually asso-

3-D Plywood not only gives three dimensional effect to this Church nave, but has good acoustical properties as well.

FURNITURE
TO MATCH

In this unusual situation the attractive Coffee Table has been designed and made of this paneling material—to match the lovely living room wall of the same material.

Housewives can get a change from the same old walls as this Portland, Oregon, home owner did by using this new decorative wall finishing.

THE JACK SALTZMAN home in Portland, Oregon, carries the sea-scape theme to the bunk-beds to match walls of boy's bed room.

ciated with hardwoods. The process of eliminating the softwood from the panel face etches the contours and natural swirls and grains of the wood even deeper into the flat panel. While actually only a fraction of an inch deep, the effect is a wall of much deeper three dimensions. Another feature of these new panels, which will be of real importance to women who like to change their furniture and who get tired of the same old walls, is the adaptability of this interesting new pattern to change. A wall can be refinished to fit a new decor, a new color scheme, or even new furniture or floor covering, without losing the charm and beauty of the natural grain of the wood.

Another feature liked by some, is its toughness and durability. Only the hardest grain of the wood has been left, and this surface resists wear like hardwood.

Noticeable in most offices where this paneling has been installed is the informality created, the living-room atmosphere captured. The intriguing pattern of the wood grain offers a pleasing contrast to solid walls.

This unique parquet ceiling carries out the informal, country living theme in this Eugene, Oregon, residence.

CUMMINS SERVICE & SALES . . . Diesel Repair Shop

COMMERCIAL APPLICATION OF RADIANT HEATING

BAKERSFIELD, CALIFORNIA

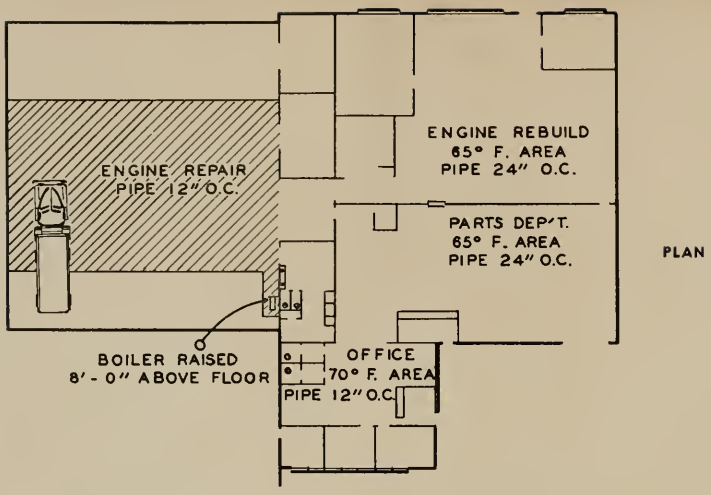
By TOM BOOTH, Engineer*

"Radiant Heating," in the vast majority of instances, is considered in terms of the proven development of a new, efficient, economical method of heating a home, and the wide diversity of radiant heating installations, with respect to climatic conditions and geographical locations, has proven this method of residential heating to be the ultimate in comfort.

However, the use of radiant heating for industrial and commercial buildings is a much newer development in the field of heating engineering. The many instances of satisfactory installations; the flexibility of the method to meet specific heating problems; the rapid lowering of costs of initial installation, and the proving by case history of minimum operational and maintenance cost, has stimulated a keen interest among Architects, Engineers, Planners, and owners in "Radiant Heating."

SHOP AREA

Spacious, interior vehicle repair department opens through large doors into outer yord and parking.



HEATING DESIGN FOR CUMMINS SERVICE AND SALES.

Nearly every commercial shop, assembly room, or warehouse built today is of one story construction, with a concrete slab floor and a relatively high ceiling. Such a design allows the best use of modern material handling equipment and makes for efficient operating layouts. This design also lends itself to the most efficient and satisfactory way of heating—every square foot and every cubic foot of such a structure can be completely heat-controlled by proper use of radiant heating, and at an initial installation cost which is very often much lower than thought possible because in many instances the advantages of radiant heating are not clearly understood.

Let us consider the basic installation and function of radiant heat in a one story shop building with a sixteen foot ceiling and a concrete slab floor.

First, the pipes of a corrosion proof material such as copper are imbedded in the concrete slab, then a water heater, sized for the job, is installed in a location, central as possible, with a pump which is thermostatically controlled to circulate the warm water when needed. The floor piping of course, must be carefully engineered and the boiler set-up must have all the necessary safety devices, but essentially all that is required is the proper circulation of lukewarm water throughout the piping in the concrete floor slab, to create a surface temperature of 83 degrees F. (This temperature is skin temperature and feels neutral to the feet or hands), which will give a 65 degree to 70 degree F. air temperature with an outside temperature of 30 degrees F.

This warm floor slab generally heats all objects above

ANOTHER VIEW of portion of the Repair Shop.

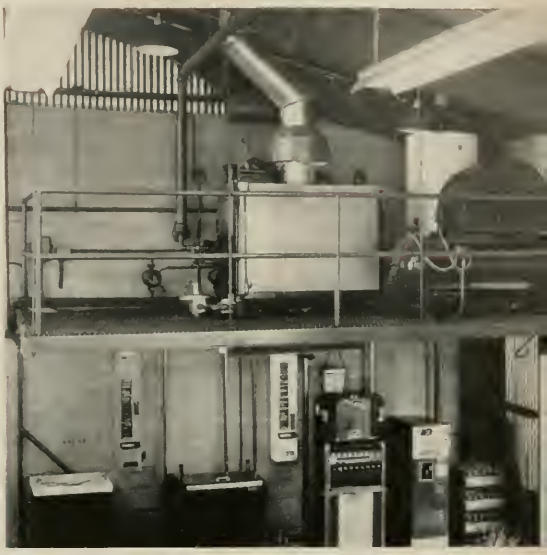
it, including the occupant, but does not materially heat the air. The air does move gently from the floor to the ceiling maintaining even air temperatures at all levels. The lack of excessive warm air currents keeps all the heat in the building and makes for economy of operation not found in any other heating system. In other words, you do not have to pay for heating 90 degree air at the ceiling only to end up with 60 degree air temperatures near the floor where you desire and need the heat—you have an even 70 degrees at all levels. The warmth of the floor slab actually takes away from the hardness and tired feet complaint of concrete, which is actually caused by the coldness of concrete, rather than the hardness.

Heating systems of this type have been installed for as little as 45 cents per square foot, which is cheaper in many instances than other heating systems which do not begin to do the same heating job.

An analysis of radiant heating uses and installations shows the following to be some of the varied types of commercial instances where radiant heating systems have been properly designed and used to the complete satisfaction of the occupants:

Garages—Applied in areas where mechanics are working under vehicles, a reduction in health hazard has occurred, better man efficiency has resulted, and a much desired employee-management relationship developed. The automobiles, or trucks, tools and repair equipment is always warm to touch, and there is no problem of working, then huddling around a stove to get warm,

(See page 37)



Close-up of the heating unit installation, which has been placed on platform above the floor area of the building.

Machine Shop (below) where a controlled temperature is a big factor in efficient operation of equipment.

Photos By Cal Williams

FOUNDERS of the ASSOCIATION

MURRAY ERICK (bottom row—left to right), BLAINE NOICE, WILLIAM MELLEMA, RALPH DeLINE; Top Row, CLARENCE DERRICK, OLIVER BOWEN, RUFUS BEANFIELD.

Structural Engineers Association of Southern California
SILVER ANNIVERSARY

MEETING HONORS FOUNDERS OF ENGINEERING GROUP

Silver Anniversary meeting of the Structural Engineers Association of Southern California, recently held in Los Angeles, honored founder members of the engineering group with seven of the original thirteen in attendance. Congratulating those present but unable to attend were founder members Mark Falk, Preston Jones, R. R. Martel and C. E. Noerenberg. Two of the founder members are deceased, Wendell Butts and Paul Jeffers.

The SEAOSC was organized before enactment of the Civil Engineers Act in the State of California. It was due to the organized efforts of the group that recognition was given by the State of California to the structural engineer as a distinct division of engineering.

It was fortunate that the Association succeeded along these lines and was prepared to move rapidly and effectively immediately following the disaster of the 1933 Long Beach earthquake. The structural engineers were prepared to aid in the enactment of the Field Act, and to work together in the development of design for earthquake resistance in the common interest under the auspices of their Association.

The desire to form an Association was spontaneous. Much of the work of actively organizing the group was carried by Oliver Bowen, Paul Jeffers and Ralph DeLine.

The only real delay in organizing was in finding a date when all the founder members could meet. Ralph DeLine solved this problem by mailing a calendar to each man, asking that they check the evenings they could NOT attend a formation meeting. The only date when all could meet was the first Wednesday of the month—February, 1929. The first Wednesday of the month has been the regular meeting date since.

The first meeting was held at the University Club, and Paul Jeffers (now deceased) was elected President; Mark Falk Vice President; and Ralph DeLine Secretary-Treasurer.

Each of the founder members present spoke at the Silver Anniversary dinner. Murray Erick and Oliver Bowen told of the early days of structural engineering. Both thought it doubtful that a modern young structural engineer could read a set of the early plans.

There was only one load factor WL over 8, 10, or 12. William Mellema told of his first attempt to design for lateral forces, and of the Department of Building and Safety inspector who, on examining the plans, laboriously questioned the whole procedure and dismissed it with the remark, "I don't give a *!#? what you do with the ends of the beams, but make sure it is WL/8 in the middle."

Rudimentary as were the plans drawn for some of Los Angeles well known structures, the judgment of the structural engineers was good, and the buildings stand today unmarred by time or quakes as evidence of good design.

Each founder member contributed from his experiences that led them to join hands and secure recognition of the profession of structural engineering. Today's stu-

(See page 38)

AMERICAN SOCIETY FOR METALS
PUGET SOUND CHAPTER

The Puget Sound Chapter heard Captain Pieczentkowski discuss the design and operation of the modern torpedo as well as its development, at a recent meeting. The Captain, having served in the submarine service of the U. S. Navy for some 20 years and being a mechanical engineer himself, was able to show how the modern torpedo represents the solution of a great many metallurgical problems.

The torpedo, in essence the forerunner of the guided missile, incorporates many of its same functional difficulties. The power plant, of the turbine type, was limited in efficiency because of the lack of high temperature materials. Emphasis on these materials for missile and jet engine design has speeded the advent of turbine parts which can be operated in the temperature range of 1600°F to 1700°F.

Delivery of torpedoes to the target by use of airplane and helicopter called for lighter weights with no decrease in explosive pay load. More and more of the components that were formerly of the heavier metals, such as copper and brass, were replaced by aluminum alloys. The war head shell, formerly of steel, has been successfully made from a 220 aluminum base alloy casting.

Water entry shocks, due to launching from aircraft at considerable altitudes, still does not allow certain alloy replacements, but the torpedo has come a long way.

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BRANCH OFFICE AND WAREHOUSE SAN FRANCISCO

AN INVESTMENT BLUEPRINT
for
ARCHITECTS & ENGINEERS

By FRANK J. KIHM*

In preceding articles the author has described how professional people can share in the growth and prosperity of America by owing shares of reputable and prudently managed investment companies. The risks inherent in such securities, which fluctuate in value and pay dividends in varying amounts depending upon their earnings, have also been pointed out.

Mutual investment companies diversify their investments among many carefully selected securities, and they watch those investments continuously, revising them from time to time as conditions warrant. Shares of these companies may represent a complete investment program in a single security, and thus they are convenient to own. They are equally convenient to purchase.

FRANK J. KIHM
Consultant H. E. Work & Co., San Francisco

You can buy shares of investment companies outright in any amount you have to invest, or you may acquire them through regular accumulation plans. These plans may be started with an initial deposit of from $20 to $300, and may be continued with small periodic payments (as low as $10 monthly).

What are the advantages of buying securities on a regular monthly plan? The most obvious is that you can buy an interest in a cross section of American industry in exactly the same way you can buy a home, an automobile, or television set on convenient installments. In other words, you don't need a lot of money to start becoming a stockholder.

Incidentally, most investment company plans are more flexible than the ordinary installment contract. Investors may skip some payments, change the amount invested, make additional payments, or terminate a plan at any time—all without penalty. There is a sales charge to investors included in the offering price of most investment company shares and full details may be seen in their prospectuses.

One of the biggest advantages in systematic investing at regular intervals is cost averaging. By investing equal amounts of money at regular intervals over a period of years and at fluctuating prices, you will acquire more shares at low price levels, and fewer shares at high price levels. As a result your average cost will be automatically lower than the average of the prices at which the shares were purchased.

It should be emphasized here that these plans do not and cannot protect against loss of value in declining markets. For example if the plan were discontinued when the cost of the accumulated shares exceeded their cash value, a loss would be sustained. It is therefore highly important that the investor take into account his financial ability to continue such a plan through periods of low price levels.

Accumulation plans for acquiring investment company shares should also be undertaken only after an adequate life insurance program has been provided, and a cash reserve in savings accounts or government bonds established.

An investing plan in mutual funds differs from a savings plan. In the latter you know how many dollars you are accumulating, but not what their purchasing power will be. (The value of the 1953 dollar dropped to an estimated 48 cents last year.) In systematic investing in mutual funds there is the possibility that your shares may be worth more than you paid for them, as well as the risk that their value might be less than cost.

EDITOR'S NOTE: Mr Kihm is well qualified to discuss the investment needs of professional people. He was Executive Secretary of the San Francisco Medical Society from 1945 to 1952, and City Editor of the Wall Street Journal (San Francisco) from 1939 to 1945, and has contributed articles to Barron's and other business publications. He is now with the San Francisco investment banking firm of H. E. Work & Co. This is the sixth and concluding article of a series of special articles written for ARCHITECT & ENGINEER magazine.

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OREGON CHAPTER

Prof. Wally Hayden, head of the School of Architecture of the University of Oregon, was the principal speaker at the March meeting held in Portland on the 16th.

He showed a number of slides on photographs taken in South America which placed emphasis on archaeological explorations being made of Inca and Mayan architecture. The program afforded an excellent opportunity for those in attendance to compare ancient and modern architecture and artistic expression.

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EAST BAY CHAPTER

Past President Harry Bruno served as moderator at the March meeting which was devoted to discussions of Uniform Codes, enforcement of Codes, uniform enforcement of Plumbing and Heating Codes, methods of revising codes and keeping up-to-date, appeal boards, improving procedures in the adoption of new materials, and improving procedures in the adoption of new construction methods.

The annual architects' exhibit is scheduled for April 12-17 at Breuner's in Oakland.

PRATT INSTITUTE ESTABLISHES SCHOOL OF ARCHITECTURE

The Board of Trustees of Pratt Institute have announced the establishment of a School of Architecture as a separate unit of the Institute, starting July 1, 1954.

President Francis H. Horn also announced that in addition to the present five year program for the Bachelor of Architecture degree, a sixth year, leading to the degree of Master of Architecture will be offered beginning with the September term.

Olindo Grossi, professor and chairman of the Department of Architecture, the Art School, has been appointed Dean of the new school. He has been identified with the

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Producers' Council—Northern California Chapter (See Special Page)

school since 1945, and is a practicing architect; chairman of the Educational Committee of the New York Architectural League, member of the executive committee of the New York Chapter of the A.I.A., and a former trustee of the Beaux Arts Institute of Design.

NORTHERN CALIFORNIA CHAPTER

Newly licensed architects in the Bay Area were honored at a cocktail party given at the California School of Fine Arts in San Francisco on March 2. The event was jointly sponsored by the W.A.L. Chapter of San Francisco.

Lawrence Halprin, noted landscape architect, was the principal speaker at the regular March Chapter meeting, held in the Burgermeister Brewery, San Francisco.

Charles Pope has completed selection of 30 buildings in San Francisco which are to be used by various promotional organizations as typical examples of San Francisco architecture.

W.A.L. EAST BAY

Mrs. Winfield Hyde was installed as President at the March meeting held in the College Women's Club of Berkeley. Also taking office to serve for the ensuing year with Mrs. Hyde, were Mrs. Alvin Fingado, first vice-president; Mrs. Russell de Lappe, second vice-president; Mrs. Andrew Anderson, corresponding secretary; Mrs. George Kern, recording secretary; and Mrs. Daniel Date, treasurer.

The annual Homes Tour has been set for May with Mrs. Keith Reid and Mrs. Roger Lee, co-chairmen.

SOUTHERN CALIFORNIA CHAPTER

George Vernon Russell served as Moderator of a discussion on Design at the March meeting, held at the Hollywood Athletic Club, Hollywood.

Participating in the panel were Charles Detoy, realtor and president of the Los Angeles Chamber of Commerce; Mahlon Arnett, vice president, Bullock's Department

(See page 33)

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AMERICAN SOCIETY OF CIVIL ENGINEERS LOS ANGELES SECTION

Highlight of a recent meeting was the presentation of the Rudolph Hering Medal to William F. Garber for his part as co-author with Ralph Stone of a paper entitled "Sewage Reclamation by Spreading Basin Infiltration." Stone was awarded a similar medal during a ceremony held at the recent annual meeting of the ASCE in New York City.

The medal is awarded to the authors of an original paper which contains the most valuable contribution to the increase of knowledge in and to the advancement of, the sanitary branch of the engineering profession.

Garber is laboratory director of the Hyperion Treatment Plant of the City of Los Angeles and has general responsibility for all data used for control of plant processes, as well as being in charge of experimental work aimed at process improvement and cost reduction.

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AMERICAN SOCIETY OF MECHANICAL ENGINEERS

Dr. J. P. Den Hartog, professor of Mechanical Engineering at the Massachusetts Institute of Technology, was the principal speaker at a recent meeting of the American Society of Mechanical Engineers, held in the Engineers' Club, San Francisco.

He discussed various phases of vibration that have occurred in the last decade in many applications such as the Mississippi tug boats, steam turbines, gas turbines, large industrial smoke stacks, electric transmission lines and suspension bridges.

BAY COUNTIES CIVIL ENGINEERS AND LAND SURVEYORS ASSOCIATION

Jack Y. Long, San Francisco, has been elected president of the Bay Area Civil Engineers and Land Surveyors Association for 1954. Long is also a director of the Structural Engineers Association of Northern California.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"Foundations for Equitable Life Building, San Francisco," was the subject of an illustrated talk by Charles H. Lee, consulting engineer, at the March meeting, held in the Engineers' Club, San Francisco.

Lee, Foundation Engineer for the project, gave a comprehensive insight of the engineering problems involved in consideration of foundations for this multi-story office

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John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of
Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of
Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices. L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
L. A. O'Leary, Chairman; P. V. Garin, Vice-chairman; H. P. Hoopes, Sec. Office Sec., 1550 Powell St., Emeryville, Calif.

Society of American Military
Engineers—San Francisco Post
CDR N. M. Martinsen, President; L. L. Wise, 1st Vice-President; Col. Paul Berrigan, 2nd Vice-President; R. M. Hamilton, Secretary; Thomas Hurley, Treasurer. Directors, RADM C. A. Trexel, J. G. Wright, LTCOL C. S. Lindsey, C. E. Bentley, F. R. Fowler, BRIGEN D. F. Johns, and RADM L. N. Moeller.

---

building presently being constructed on the corner of Sutter and Montgomery streets.

Leslie Graham and Clarence Rinne have been named chairman and co-chairman respectively of the Joint Building Code Committee for 1954.

New Members include: Marvin A. Larson, Member; and Gerald V. Jacobs, Junior Member.

SEAOSC WIVES FORM SC AUXILIARY

More than a hundred wives of members of the Structural Engineers Association of Southern California recently formed an auxiliary organization to be known as the "Donas S.E.A."; adopted a constitution and by-laws and will hold meetings quarterly.

Mrs. Joseph Sheffet was elected president. Other officers include Mrs. LeRoy Crandall, vice-president; Mrs. Marvin Kudroff, secretary; Mrs. George Carroll, treasurer; and Mrs. Ernest Hillman and Mrs. William Wheeler, directors.

WISKOCIL AWARD

In honor of the late Professor C. T. Wiskocil, the Clement T. Wiskocil Award has been established at the Berkeley campus of the University of California, to be presented each semester.

The award is jointly sponsored by the members of the civil engineering faculty, the Student Chapter, ASCE, and the Beta Chapter of Chi Epsilon.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Paul William Abeles, D.Sc., consulting engineer and lecturer for graduates of the Brixton School of Building, London, England, was the principal speaker at the March meeting, taking as his subject "Prestressed Concrete."

Dr. Abeles discussed many phases of prestressed concrete including principles, practical applications, new developments in Europe, various types of systems, and the development in Great Britain, using illustrations to emphasize various important points.

The annual meeting of the SEAOSC with the A.S.C.E. has been scheduled for September 8th. 1954 Committees have been announced by President Wright.

FEMINEERS

Mrs. Lillian MacMillan of the Elizabeth Arden Salon, San Francisco, was the principal speaker at the March meeting held in the Elks Club, San Francisco. She took as her subject "Complete Beauty."

Mrs. John Sardis was hostess of the day.

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PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

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Treasurer, Carl Frank
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Russ Building

Edited by Stanley L. Basterash—WESTERN ASBESTOS COMPANY

TRAVELING CARAVAN

The Producers' Council's $100,000 Caravan of Building Products has completed construction and arrangements and taken to the road, making first appearance in Pittsburgh, March 2nd. From scant reports we really have something. Don't forget to docket this special event, scheduled Wednesday, April 23rd at the Mark Hopkins Hotel in San Francisco.

The exhibits are being transported in a specially constructed trailer which prominently displays The Council's name and words, "CARAVAN OF QUALITY BUILDING PRODUCTS."

Forty-four exhibits will be shown in all scheduled cities for the tour and the four west coast stops will have an additional booth belonging to a regional member.

The Northern California Chapter has been busily preparing for the showing and formal announcement and descriptive mailing piece are forthcoming.

A cocktail period will be one of the background incentives for attendance.

C. T. (TED) BAKEMAN

MARCH INFORMATIONAL MEETING

A record attendance was noted at the Aluminum Company of America sponsored March 8th meeting, held in the Comstock Room of the Palace Hotel. The subject of "Light Weight Curtain Wall and Spandrel" was promoted intimately through a twenty-five minute color film showing the full construction of the thirty-two story ALCOA Office Building in Pittsburgh from excavation to 410 feet above street level. Al West, of Alcoa headed a panel discussion along with the question and answer period. Of special added interest was a scale model of the building on display. (By the way, had a call from an Architect who has a considerable supply of bicycle tire inner tubes. I suggested he save them for awhile as the market is definitely on the increase, what with so many windows going to be installed on buildings these days.)

Not to detract from ALCOA's rightful command for attendance at any display of their fine products, I would like to point out that the attendance at the informational meetings has been continually increasing.

This brings to mind how important the program is to member companies in the promotion of products. Ted Bakeman has done an outstanding job in promoting the program considering the many details of arrangements which must be made. Such as contacting firms, in fact, actually selling them on the program value.

In light of the response in attendance and word of mouth praise, I should think a firm would jump at this opportunity. I visualize the program chairman's job being more of moderator in the appeasement of member firms vying for monthly program schedule.

How about it P. C. members? Let's give ourselves a break!

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

A.I.A. ACTIVITIES

(From page 29)

Store; Henry Eggers, architect; and Arthur B. Gallion, Dean of the School of Architecture, University of Southern California.

AMERICAN INSTITUTE OF ARCHITECTS CONVENTION

The 1954 annual convention of The American Institute of Architects will be held in Boston, Mass., June 14 to 19.

Theme of the convention will be "Forces That Shape Architecture."

WASHINGTON STATE CHAPTER

Elizabeth Kendall Thompson, Western Editor of Architectural Record, was the principal speaker at the March meeting, held in the Sorrento Hotel, Seattle.

Mrs. Thompson took as her subject "What Public Relations Can Do For You, and Vice Versa." The Beaux-Arts Players was an added feature of the meeting.

CALIFORNIA COUNCIL OF ARCHITECTS

Organization of the Council for 1954 was completed with election of Malcolm Reynolds of Oakland as President. Others named to serve with him were Henry L. Wright, vice-president; George Lind, secretary; and John Bomberger, treasurer.

Appointment of Council committees for 1954; adoption of a $35,500 budget for the year; and authorization for a special committee to recommend action on the Architect's Practice Act, were highlights of the initial Council meeting.

PASADENA CHAPTER

The March meeting was a joint session with a hand-picked group from the Producers Council, who presented interesting, and informative information pertaining to the construction industry.

The Sixth Annual Modern House Tour, sponsored by the Radcliffe Alumnae of Southern California, has been scheduled for May 15 in the Los Angeles area and May 22 in Pasadena and San Marino.

SAN DIEGO CHAPTER

The March meeting was devoted to a discussion of Heat Pump functions with Mark Mooney, vice-president of the Tycoon Corpn, the principal speaker.

Joining with the archirects in the program were the San Diego Engineers and a number of guests.

JOHN MacLEOD ELECTED PRESIDENT ASSOCIATED GENERAL CONTRACTORS

John MacLeod of Paramount, California, was elected president of the Associated General Contractors of America for 1954 at the association's 35th annual meeting, held earlier this month in Los Angeles.

George C. Koss, president of the Koss Construction Co., Des Moines, Iowa, was named vice-president, and named to the Board of Directors were: Fred Birch, Great Falls, Montana; James W. Cawdrey, Seattle, Washington; D. L. Cheney, Seattle; W. Ray Rogers and Fred H. Slate, Portland, Oregon; J. A. Thompson, Inglewood, Calif.; E. J. Maupin, Fallon, Calif.; Marshall J. Wylie, Cheyenne, Wyoming; all representing the West.

More than 2000 of the nation's leading contractors attended the four-day meetings.

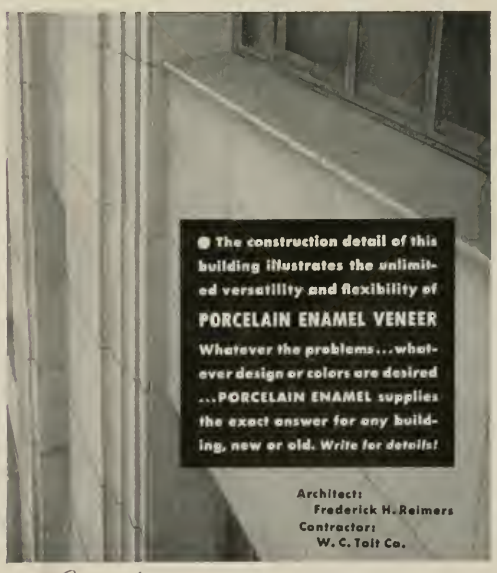
AGC SURVEY

(From page 8)

cline in federal work. Some increases in commercial and residential work.

Southwest—Declines predicted both in building and heavy construction with highway work increasing. A substantial boom in commercial and school construction and a definite decline in residential building. As a result, home builders are bidding on commercial work and going in for heavy construction as well, replies stated. The construction market has been affected by the drop in the agricultural economy. Good weather has enabled contractors to "catch up" on their work and left them free to bid on more jobs.

Nation-wide on the labor front, 56 percent said wages would rise, while the remainder looked for a more or less stabilized situation for the next six months.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PERSONALITIES

STERLING S. GREEN
Civil Engineer
Los Angeles, California

Sterling S. Green, serving this year as President of the Los Angeles Section of The American Society of Civil Engineers, received his B.S. in Engineering from the University of California at Berkeley after having first started his education at the University of California at Los Angeles.

STERLING S. GREEN
Engineer

He then obtained an M.S. degree in Civil Engineering at the University of Southern California, and in 1931 started work for the Los Angeles City Department of Water and Power.

Green is at present the Design and Materials Test Engineer for the Los Angeles City Department of Water and Power. His professional experience has included laboratory and inspection work, plus preliminary investigation of large water works projects, foundation investigations and design of earthfill structures.

He has been very active in A.S.C.E. activities on both national and local levels. During 1944 and 1945 he was treasurer of the Los Angeles Section, and in 1949 he served as vice president of the Section.

Next Month: F. Bourne Hayne, A.I.A. Architect, San Francisco.

METAL ENAMELING CO. NAMES BOARD MEMBERS

J. T. Penton, president of California Metal Enameling Company, Los Angeles, recently announced the appointment of four outstanding business leaders of Southern California to the company's board of directors.

K. L. Carver, retired vice-president of the Bank of America; Denis H. Grady, corporation attorney who served on the law faculty of Northwestern University; Raymond W. McKee, member of the American Institute of Accountants, and secretary-treasurer of the Maywood Glass Company; and Daniel P. O'Keefe, president of the manufacturing firm of O'Keefe and Merritt Company, are the recent appointees.

The firm has just completed an $80,000 new equipment and plant improvement program and has authorized $50,000 for construction of additional building facilities to the 4½ acre plant.

ERNST MAAG APPOINTED TO IMPORTANT STATE POST

Ernst Maag, Los Angeles, has been appointed Principal Structural Engineer in charge of the Los Angeles office of the State Division of Architecture, School Section, succeeding Harry Bolin who retired on January 15, after twenty years of service.

ARCHITECT MOVES OFFICES

The architectural offices of Leslie I. Nichols, A.I.A. have been moved from 627 University Avenue, to 454 Forest Avenue, Palo Alto. Telephone DAvenport 3-1136.

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High School Gymnasium, Culver City, California. Architects, Daniel, Mann & Johnson. Structural Engineer, Irving Mendenhall. General Contractor, Rains-McLellan Corp.

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• J. Huizenga, Gen. Contractor

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CHICO SHOPPING CENTER PLANNED

Architect Armsby Tod Hart of Sacramento is completing plans for the construction of a new Shopping Center, including a super market and group of stores in the Longfellow Terrace development project of Chico, Butte county.

The building will be of 1-story, frame construction and will contain 20,000 sq. ft. of floor space. Estimated cost $150,000.

VETERANS MEMORIAL

Architects Robert N. Eddy and G. M. Deasy of Bakersfield are drafting plans and specifications for the construction of a 2000 seating capacity addition to the Veterans Memorial Building, Porterville high school campus.

Estimated cost is $500,000.

STORAGE BATTERY FACTORY SITE

The Gould-National Batteries, Inc., of St. Paul, Minn., has purchased a 20-acre site near Antioch, Contra Costa county, and plan on building a $1,000,000 storage battery factory on the property in the immediate future.

SCHOOL BONDS APPROVED

Voters of the Lowell School District, Whittier, Los Angeles county, approved the issuance and sale of $600,000 in school bonds to finance proposed school construction in Los Angeles and Orange counties.

NEW CATHOLIC HIGH SCHOOL

The Roman Archbishop of San Francisco has announced the construction of a new Catholic High School to be built South of the Mairfair Sub-division in San Joaquin county near Stockton, at an estimated cost of $2,000,000.

J. Clarence Felciano of Santa Rosa is the architect.

ARCHITECT SELECTED

The architectural firm of Buchter & Lillis of Vallejo has been selected by the City of Vallejo to design a new Fire House building to be erected on Highway 40, Solano county.

PUBLIC HEALTH BUILDING

Architect Michael Goodman, Berkeley, is preparing preliminary sketches for the proposed construction of a new Public Health Building for the City of Berkeley.

Estimated cost is $150,000.

PAPER MILL SITE

The Crown Zellerbach Corpn of San Francisco has purchased a 42-acre site near the city of Antioch, California, and will construct a new paper mill on the site in the near future.

The property is located on the San Joaquin River, in Contra Costa county.

CATHEDRAL ADDITIONS

Architect Carleton M. Winslow, Beverly Hills, California, is preparing plans for extensive additions to the Episcopal Cathedral in Honolulu, Hawaii.

WAREHOUSE OFFICE

The Prune & Apricot Growers Association of San Jose will construct a new Warehouse and Office Building in Gilroy, in the immediate future. The new structure will be of 1-story, reinforced concrete construction with a wood roof; 80x200 ft.

Robert V. Lotz, San Jose is the engineer.

JACK W. WATSON PROMOTED

Jack W. Watson, Pacific coast sales manager for the Kaiser Aluminum & Chem-Kulijian Corpn, Engineers and Constructors public relations and advertising of the firm, according to a recent announcement.

AMERICAN CONCRETE INSTITUTE HONORS RAYMOND E. DAVIS

Raymond E. Davis, director emeritus, Engineering Materials Laboratory, and formerly professor of civil engineering, University of California, Berkeley, was elected to Honorary Membership in the Institute at its recent annual meeting in Denver, Colorado, according to an announcement by Henry L. Kennedy, Institute president.

Davis is a past president of the Institute, and served on the Board of Direction. He is the author of numerous papers on "concrete" and received the ACI Wason Medal for the most meritorious paper of 1931, "Flow of Concrete Under the Action of Sustained Loads"; the same award in 1934 for his work on the paper "Cement Investigations for Boulder Dam with the Results Up to the Age of One Year," and in 1948 received an award for his paper on "Restoration of Barker Dam." He also won the Institute's Turner Medal in 1952 for "noteworthy achievements" in the concrete industry.

ARCHITECT SELECTED

The architectural firm of Masten & Hurd, San Francisco, has been commissioned by the Sharp Park Elementary School District, Sharp Park, San Mateo county, to draft plans and specifications for the construction of a new Pedro Valley Elementary School.

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ILLUMINATING ENGINEERING SOCIETY NORTHERN CALIFORNIA SECTION

A student competition in architectural lighting design open to senior and graduate students in the College of Architecture of the University of California at Berkeley has been announced by the Northern California Section of the Illuminating Engineering Society.

Lloyd Gartner, A.I.A., well-known San Francisco architect, is chairman of the I.E.S. award committee, which includes Robert Dummel, Charles R. Long and Lyle E. Patton. Representing the College of Architecture are Dean William W. Wurster, and Professors Vernon De Mars and Michael Goodman.

The first prize will be $100, second prize $50 and third prize $25, plus certificates of award. For the next three places, certificates and one-year student memberships in I.E.S. will be awarded. The problem to be solved is now being developed and will be announced.

A requirement of the competition is that the lighting system be integrated as to type, form and scale with the architectural and decorative design of the room or area. The I.E.S. Lighting Handbook and published I.E.S. Standards will be the basis of all lighting calculations and layouts. The minimum illumination levels must be consistent with the best current practices for the visual tasks to be performed in both general and specific areas. A brightness balance must be maintained which will accomplish specified objectives such as visual efficiency, comfort and atmosphere.

In connection with the competition, four lectures will be delivered by members of the Illuminating Engineering Society before students registered in the College of Architecture.

RESEARCH ENGINEER ELECTED PRESIDENT NATIONAL GROUP

Louis N. Hunter was elected president of the American Society of Heating and Ventilating Engineers at the Society's recent annual meeting in Houston, Texas.

Other officers named included John E. Haines, Minneapolis, vice-president; John W. James, Chicago, vice-president in charge of research; E. R. Queer, State College, Pa., treasurer; and Council members C. H. Pesterfield, East Lansing, Michigan; B. H. Surlock, Jr., Boulder, Colorado; John H. Fox, Toronto, Ontario, Canada; and A. J. Hess, Los Angeles, California.

ARCHITECT WILBUR D. PEUGH, A.I.A.

Wilbur D. Peugh, 56, architect for some of northern California's most striking new buildings, died in San Francisco recently. He designed the United Air Lines buildings at San Francisco International Airport, and at the time of his death was architect for the 26-story Equitable Life building now being constructed in San Francisco.

INTERNATIONAL AIRPORT

(From page 6)

course, a popular mid-week race track before World War II. This new runway is 7,900 feet long and 200 feet wide with a parallel taxiway 75 feet wide.

The entire output of furnace ash from Bunnerong power station, the largest in New South Wales, is being used as a foundation for the runways, taxiways and hangar aprons and tarmacs.

The ash is laid directly on the sand and then rolled with a 400,000 lb. (180 British tons) "compactor." This compactor is mounted on four huge pneumatic rubber tires, seven feet in diameter and two feet six inches wide. Each tire costs £A2,500. Rolling, or compaction, is done in four stages, the weight being progressively increased until the full 180 tons maximum weight is being used. The weight distribution on each tire at maximum weight is 100,000 lbs. a tire, which is roughly 40,000 lbs. heavier than the individual wheel load of the Boeing Stratocruiser, the largest aircraft using Kingsford-Smith Airport today.

Nine inches of fine crushed rock is then spread over the ashes, and after being saturated with fresh water this is also compacted with a 40-ton rubber tired roller. Finally the runway is paved with an inch of bituminous concrete, which gives a smooth-surface runway which would comfortably support even Britain's huge 70-ton Brabazon airliner—the largest land plane in the world.

Kingsford-Smith Airport is almost at sea level and is surrounded by low-lying hills. Natural land fall is poor and water runoff, as a result, is slow. Because of this, drainage presented a difficult problem to engineers. They found it extremely difficult to lay drains, until a special "de-watering" plant was installed. This machine pumped by vacuum great quantities of ground water from the soil. Engineers were then able to lay 25,000 feet of drains of various sizes. There are still many thousands of drainage pipes to be laid.

One of the greatest problems is yet to be overcome—

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sand drift. Huge areas covered with sand dredged from Botany Bay are salt-laden deserts, incapable of supporting even a solitary weed. There are about 500 acres of this "desert," and on windy days the sand is sometimes blown as high as 100 feet in the air. It is not improbable that, unless this is corrected, the airport on such days would be closed owing to poor visibility caused by sand clouds!

Introducing a top-dressing of soil to overcome the problem is not practicable since it would need almost 1,000 tons of soil to cover one acre of sand. Experiments with certain types of grasses are being carried out and scientists are confident that the problem can be solved.

When the runway and taxiways are finished they will have cost more than £A6,000,000 to make Kingsford-Smith aerodrome a modern flying field. The cost of terminal buildings and aprons will probably double the cost.

ARCHITECTURAL FIRM IS ESTABLISHED IN SEATTLE

Robert L. Durham, Seattle architect, has announced organization of a new firm, Durham, Anderson and Freed. The new partners being David R. Anderson and Aaron Freed.

Anderson is a graduate of the University of Michigan, '49, while Freed is a graduate of the University of Illinois, '48. Both saw military service in World War II.

Durham has practiced in Seattle since 1941, designing a number of churches, school, Forest Lawn Mausoleum, and various remodeling projects including the current downtown Y.W.C.A.

ARCHITECTURAL FIRM DISSOLVES

William Allen and W. George Lutzi, architectural firm located at 6112 Wilshire Boulevard, Los Angeles, announces the dissolution of their partnership. William Allen, AIA, will continue the practice of architecture at Suite 200, 6112 Wilshire Blvd., and W. George Lutzi, AIA, will establish offices for the practice of architecture at Suite 203, 6112 Wilshire Blvd., Los Angeles.

RADIANT HEATING

(From page 25)

working and huddling continuously throughout the day.

Machine shops—where uniform heat is maintained throughout every square foot of work area, speeds work. Machines and parts are equal temperature, not only while in operation during the "work" shift, but even temperatures are maintained during "off" hours so that there is no lost time, wasted efficiency, and unproductive factors involved in "warm-ups." Machine work can be safely stored on the floor without fear of forming condensation which quickly rusts highly finished surfaces.

Truck depots—This type of building, as illustrated in this article, usually has large doors which are raised during the freight handling and "operational" periods. Radiant heat, properly engineered to meet the specific needs of this type of commercial business, keeps workers warm during day or night, retains proper heat in desired areas, and can be adjusted to specific "merchandise" requirements. Heavy repair needs on handling equipment can be controlled to provide adequate heating in floor areas where mechanics may be working.

Assembly plants where women are employed have reported highly in favor of radiant heating as it prevents tired and cold feet and even temperatures. The lack of sudden drafts, or blasts of hot air, eliminates the cause of many complaints and pays off directly to plant-operation by reduction of employee absenteeism due to colds.

Storage areas probably present one of the most difficult heat problems, as certain areas may need a moderate temperature maintained, others may require a higher degree of heating, and still others may require a lessening of heat factors. Radiant heating offers an opportunity to "select" area heating and solves these problems as well as the problems of rust, many forms of rot and fungus growth, and other factors involved in "term" storage of goods and merchandise.

Among the more recent types of radiant heating which have caused quite a bit of attention among designers and constructors is found in the field of recreation, where for example, porches and decks of a ski-lodge have been radiant heated to keep snow away from much used entrances, and to keep available for instant use out-door areas which might normally be covered with snow, or

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Architects, engineers, builders, and owners are discovering many new applications for the principles of radiant heating . . in residential, commercial, and industrial construction, and while the logical place to install radiant heating is in the floor at the time of construction, a very satisfactory radiant heating system can be put in an existing building by suspending finned tubing from the ceiling or trusses, and pumping hot water through that system. This method has proved ideal in greenhouse installations.

With today's importance placed upon efficient use of labor, those who are responsible for the design of buildings and areas in which that labor must be performed, can well recognize the fact that a comfortable worker is a satisfied, speedy, healthy, worker and as such is contributing much more to the complicated economic system under which industry, commerce, and finance is conducted today.

**EDITOR'S NOTE: The author is a graduate of Stanford University, Class of 1936, with a degree in Mechanical Engineering, and is President of the Tom W. Boothe Company. Radiant Heating Contractors, Lafayette, California.*

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ARCHITECT & ENGINEER
MAGAZINE

68 Post Street San Francisco

SEAOSC SILVER ANNIVERSARY

(From page 26)

dent can prepare for a career in structural engineering with a clearly defined path ahead—all due to men of the calibre of the founder members, who laid the ground rules.

The Structural Engineers Association was a distinct step in the annals of technical societies. Many of the members were, and still are, members of the parent engineering societies. Specialization has been found to be very difficult in the larger groups by nature of their size. The SEAOSC created a closely knit organization made up of those people with a common interest in a highly specialized field of engineering. As a result, the success of this organization has resulted in similar groups being organized in the San Francisco area and the Sacramento area, with the subsequent formation of the State group. Other states have since followed, and all have made their organization similar to the founding Association, that of Southern California.

From the 13 founder members, the SEAOSC membership has grown to 425. Thirty-one members have been in the Association for over twenty years.

Speaker of the technical portion of the meeting was Dr. Ray W. Clough, Assistant Professor of Civil Engineering, University of California, who took as his subject "The Use of Models in Structural Analysis."

SOUTHERN CALIFORNIA ENGINEER SPEAKER AT FLORIDA MEETING

A. L. Hanson, vice-president of Drayer-Hanson, Inc., Los Angeles, was the principal speaker at a recent meeting of the New Orleans chapter of the American Society of Refrigeration Engineers.

Hanson spoke on the fundamentals of design and application of extended fin surfaces. He also addressed the Jackson, Mississippi, chapter of the American Society of Heating and Ventilating Engineers on the same general subject.

ARCHITECT LEE A. THOMAS, A.I.A.

Lee A. Thomas, 67, prominent architect of the Pacific Northwest, died at his home in Portland, Oregon, recently of a heart ailment. Many of the outstanding buildings of Portland, Bend, and Vancouver, B. C. were of his design. At the time of his death he was architect for the new Lewis Jr. High School being built in Vancouver.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

MOTELS—HOTELS—RESTAURANTS AND BARS. An Architectural Record Book. F. W. Dodge Corp., 119 W. 40th Street, New York 18. Price $6.95.

Presents for the first time, in one place, a detailed study of physical design in motels, hotels, restaurants and bars, and graphically shows the important relationship between good design and good business.

There are over 500 illustrations, exterior and interior, floor plans, renderings, and structural designs of successful establishments, where well planned, practical design has paid off in flourishing trade and satisfied clientele. Sound, basic information on site, layout, materials and other data, will be of great value to owners and prospective owners, architects, builders, and interior decorators concerned with these building types.

The editors have presented a clear, easy-to-understand text in a field where technical language usually prevails.

DESIGN AND CONSTRUCTION OF GENERAL HOSPITALS. By U. S. Dept. of Health, Education and Welfare and the Public Health Service. F. W. Dodge Corp., in collaboration with Modern Hospital Publishing Co., Chicago, Ill. Price $12.00.

The book presents a unique collection of much needed data on hospital planning and construction for architects and hospital administrators.

Detailed information presented is the result of eleven years of research development carried on by the U. S. Public Health Service with the cooperation of the American Hospital Association, American Psychiatric Association, American Public Health Association, and the National Tuberculosis Association.

Four major parts are considered: "Schematic Plans," "Design and Construction," "Elements of the General Hospital," and "Equipment Lists," in application from an 8-bed to a 200-bed hospital. The general plans are followed by discussion of hospital planning problems from site to equipment, including the all-important items of cost and specialized construction requirements.

The book is a complete package of hospital information.

PRESTRESSED CONCRETE. By Y. Guyon. John Wiley and Sons, Inc., 440 4th Ave., New York 16, and Contractors Record Ltd., London. Price $12.00.

There is probably no structural problem to which prestress cannot provide a solution, and often a revolutionary one. Prestress is more than a technique; it is a general principle: to create in advance accurately known permanent forces acting as required. The methods employed, however, vary considerably.

A fairly detailed study of some particular applications makes it possible to bring out the general principles involved and to describe some methods which can be suitably modified for other applications. This is the aim of this book and it is therefore restricted to statically determine straight beams, and a detailed study reveals a multitude of problems, which if they can be solved, will prove of value to other methods of construction.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Magnetic contactors. New booklet gives complete information on magnetic contactors including dimensions and weights; designed to provide a safe, dependable means for repeated quick closing and opening of the electrical circuits controlling the sequence of operations in modern multiple action machines. Photographs of switches, installation diagrams, data charts, and various types included in the literature. Write for copy DEPT-A&E, Federal Electric Products Co., 50 Paris St., Newark 5, New Jersey.

Screen coating system. Preparation and coating procedures for improving light reflectivity, picture depth and clarity of both "flat" and 3-D pictures by the Re-Flex process are contained in a new four-page bulletin; also shown are results from both indoor and drive-in applications. Copies of the brochure are

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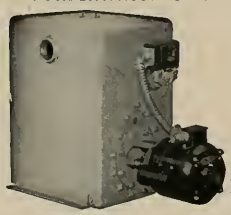

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CATALOGS - Available (Cont'd)

available by writing DEPT-A&E, General Paint Corpn, 2627 Army St., San Francisco 19.

Suspended ceiling development. "Tell-all" brochure (A.I.A. File No. 17-A) designed to clarify any question concerning radiant panel heating, radiant panel cooling, and acoustic control ceiling, is now available. Shows results of a recent market analysis, also first hand observations in the field; describes 3-way functional, suspended, ceiling; easy to lay our, easy ro install and competitive in cost; many illustrations, diagrams and charts. Copy may be obtained by writing DEPT-A&E, D. W. Day, vice-president, Burgess-Manning Co., Architectural Products Division, 5970 Northwest Highway, Chicago 31, Ill.

Large area Plexiglas lighting. A new 16-page booklet (A.I.A. File 31-F2) has been published describing a wide variety of plexiglas fluorescent lighting units. These units have moulded white plexiglas diffusers and 18-gauge cold rolled steel chassis finished in baked white enamel of 89% reflectivity. The shielding on all units is rigid and durable and will maintain its color, high transmittance and dimensions. Booklet is fully illustrated and shows many applications. For free copy write DEPT-A&E, Gruber Lighting, 125 South First Street, Brooklyn 11, N. Y.

Oil fired heating equipment. A new 8-page booklet is being offered on oil fired heating equipment; included is complete informarion and data on specifications and dimensions of various types of oil burner models along with data on a line of water heaters, air conditioners and boilers. For free copy write DEPT-A&E, Electrol Burner Mfg. Co., Inc., 22 Union Avenue, Rutherford, New Jersey.

Olympic wood finishes. A new booklet (A.I.A. File No. 25-B) covering Olympic wood finishes contains complete descriptive application data on a number of Olympic products made especially for California redwood and western red cedar exteriors; stain, bleaches and other special softwood treatments and preservatives. Actual wooden chips for each of the 16 Olympic stain colors are mounted in the file folder for precise evaluation by the architect of hiding power and intensity of each color. Data is also included on Olympic Wood Blend, a lightly pigmented, semi-transparent stain developed ro accent the grain of all smooth surface woods in both interior and exterior use. Copies of this are available by writing DEPT-A&E, Olympic Stained Products Co., 1118 Leary Way, Seattle 7, Washington.

Weather stripping metal casement windows. Literature is now available on the subject of "weather stripping metal casement windows" showing it is equally important for wood windows, as it performs the vital job of sealing out dust, drafts, cold and rain in all kinds of winter and summer weather. Illustrations show types and variety of uses, also description of materials. For free copy write DEPT-A&E, Macklanburg-Duncan Co., Box 1197, Oklahoma City, Oklahoma.

Industrial process control instruments. A new bulletin is now available describing the complete line of Wheelco instruments for industrial process control application; including data on new electronic link, a simple no-contact linkage between precision, direct measuring unit and the automatic control and recording system which gives instantaneous control and recording action. Also included in this new bulletin is brief description of the Flameotrol. Write DEPT-A&E, Wheelco Instruments Division, Barber-Coleman Co., Rockford, Ill.

Wood folding door. A new pamphlet (A.I.A. File No. 16-M), in color and fully illustrated, shows wide variety of uses and installations of the Pella Wood Folding Door, which is suitable for installation in residential construction, churches, educational buildings, and commercial use. Doors are available in stock or custom sizes; charts, photographs and diagrams on installations. For free copy write DEPT-A&E, Pella Doors, c/o Rolph, Mills & Co., 171 - 2nd St., San Francisco 5.

Where to buy four fine woods. The West Coast Lumbermen's Association just released new publication entitled "Where To Buy Four Fine Woods—Douglas Fir, West Coast Hemlock, Sitka Spruce, Western Red Cedar"; contains names and addresses of mills, fabricating and treating plants; and manufacturing facilities of each mill, and the items of lumber or timber products in which it specializes. Architects, Engineers, contractors may obtain copy by writing DEPT-A&E, West Coast Lumbermen's Assn., 1410 S. W. Morrison St., Portland, Oregon.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$12.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lepis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—
Common (all brands, paper sacks),
Per Sack, small quantity (paper) $1.05
Carload lots, in bulk, per bbl.) 3.55
Cash discount on carload lots, 10c a bbl., 10th Prox., less then carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount 2% on L.C.L.

Trinity White, Medusa White, Celaveras White: 1 to 100 sacks, $3.50 sack; warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 4-yd. loads:

Per cubic yard, 1-8 Mix	$ 9.80
1-7 Mix	10.15
1-6 Mix	10.70
1-5 Mix	11.40
Curing Compound, clear, drums, per gal.	1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .19	$ .19
6x8x16-inches, each	.23	.235
8x8x16-inches, each	.27	.27
12x8x16-inches, each	.38	.40
12x8x24-inches, each	---	.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd	$7.75
⅜-inch to ⅛-inch, per cu. yd	7.75
No. 6 to 0-inch, per cu. yd	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	⅝x2¼	½x2	⅜x2	¼x2
	$	$	$	$
Clear Qtd., White	$425	$405		
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
⅝ x 2¼	390.00	381.00
⅝ x 2¾	375.00	355.00
⅝ x 3¼	395.00	375.00
⅝ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

⅝ x 2¼ First Grade	$390.00
⅝ x 2¼ 2nd Grade	365.00
⅝ x 2¼ 2nd & Btr. Grade	375.00
⅝ x 2¼ 3rd Grade	240.00
⅝ x 3¼ 3rd & Btr. Jtd. EM	380.00
⅝ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place.	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-5I5 ..... $135.00
½-inch, 4.0x8.0-5I5 ..... 219.00
¾-inch, per M sq. ft. 292.00
Plyscord ..... 11½c per ft.
Plyform ..... 25c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standerd Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $43.50
Standard Ribbed, ditto $47.50

MILLWORK—Standerd.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		**Wholesale Raw**	**Boiled**
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		**Pure Gum Spirits**
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standerd" tar and gravel, 4 ply ..... $13.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Ceder Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Ceder Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royel Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Ceder Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Ceder Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heevier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standerd, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metel, $2.50 a sq. ft.
Fire doors (average), including herdware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.25
Vented hip skylights, per sq. ft. 2.25
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$290 per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.20 to $1.60 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.35 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $1.65 per sq. ft.
Asphalt Tile Floor ⅛" - ¾" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	Scored	F.O.B. S. F.
12 x 12, each		$ .17

Kraftile: Per square foot

	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co.,
924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co.,
625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co.,
109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co.,
300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co.,
19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 522 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-65B6
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. Sts. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
W. P. FULLER CO.
Seattle, Tacoma, Portland
NICOLAI DOOR SALES CO.
San Francisco: 3045 19th St.
F. M. COBB CO.
Los Angeles & San Diego
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
HOUSTON SASH & DOOR
Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (Composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1 2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 333 Montgomery St., DO 2-3883
Los Angeles 13: 601 West Fifth St., MI 6294

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT & HILP
San Francisco: 918 Harrison St., DO 2-0700
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES
(ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

GYMNASIUM BLDG. High School, Visalia, Tulare county. Visalia Union High School District, Visalia, owner. Seating capacity 2,000 persons—$353,779. ARCHITECT: Robert Kaestner, Visalia. GENERAL CONTRACTOR: Harris Const. Co., Fresno.

CHURCH, Orinda, Contra Costa county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. Santa Maria Parish, stucco construction, concrete floors, tile roof, radiant heating, asphalt tile floors—$220,000. ARCHITECT: Martin J. Rist, San Francisco. GENERAL CONTRACTOR: Beckett & Federighi, Oakland.

DRIVE-IN RESTAURANT, Monterey. William Terborvic, owner. 1-Story, masonry and frame construction, plate glass—$33,215. ARCHITECT: C. J. Ryland, Monterey. GENERAL CONTRACTOR: Crescent Construction Co., Monterey.

MOTEL, San Francisco. Marvin Holland, San Francisco, owner. 2-Story, frame construction — $95,000. ENGINEER: J. Y. Long Co., Oakland. GENERAL CONTRACTOR: Oliver & Coburn, Berkeley.

BANK BLDG, Vacaville, Solano county. Bank of America, San Francisco, owner. 1-Story, with mezzanine, frame and stucco, reinforced concrete vault—$78,874. GENERAL CONTRACTOR: W. J. Kubon, San Rafael.

FARM BLDG. Niles, Alameda county. Kimber Farms, Inc., Niles, owner. 1-Story concrete block and structural steel, stucco exterior, steel sash—$170,000. ARCHITECT: Sorenson & Ellsworth, Niles. GENERAL CONTRACTOR: C. E. Hooper Company, Hayward.

STORE REMODEL, Modesto, Stanislaus county. Remodel present building into 2 stores, new brick, some stone, porcelain enamel, plate glass front, dividing partitions, plumbing, electrical work—$49,955. ARCHITECT: Lloyd Garrner, San Francisco. GENERAL CONTRACTOR: A. C. Carroll, Modesto.

SELF-SERVICE RESTAURANT, Sacramento. Harts Restaurants, Sacramento, owner. 1-Story, frame construction, some structural steel, brick veneer, plate glass, paving of parking area—$42,556. ARCHITECT: Rickey & Brooks, Sacramento. GENERAL CONTRACTOR: Chas. F. Unger, Sacramento.

TRUCK TERMINAL, Emeryville, Alameda county. C. B. Rohn, California Tractor Company, Emeryville, owner. Office 2-story,

60x100 ft., frame and stucco construction, some structural steel; loading dock, 80x220 ft., concrete block and wood roof—$117,421. STRUCTURAL ENGINEER: H. M. O'Neil Co., Oakland. GENERAL CONTRACTOR: Stolte Inc., Oakland.

MEDICAL OFFICE BLDG, Long Beach, Los Angeles county. Jotham Bixby Co., owner. Frame and stucco addition to medical office building; 5-offices, asbestos shingle roofing, wood and asphalt tile floors, forced air heating, steel sash, interior plaster, plumbing, electrical, 3660 sq. ft. floor space—$60,000. ARCHITECT: Kenneth S. Wing, Long Beach. GENERAL CONTRACTOR: Millie & Severson, Long Beach.

CHURCH, Vallejo, Solano county. 1st Presbyterian Church, Vallejo, owner. Frame and stucco, some concrete block, 30,000 sq. ft. floor space; facilities for Church, Sunday School, Fellowship Hall—$372,000. ARCHITECT: Donald Powers Smith, San Francisco. GENERAL CONTRACTOR: Nomellini Const. Co., Stockton.

VETERANS SHELTER, Kezar Stadium, San Francisco. Recreation & Park Commission, City & County of San Francisco, owner. Facilities for protection of veterans attending athletic contests at Kezar Stadium, Golden Gate Park, San Francisco—$46,460. GENERAL CONTRACTOR: Robert L. Wilson, San Francisco.

METAL SHOP & SHOWER BLDG, High School, Paso Robles, San Luis Obispo county. Paso Robles Union High School District, Paso Robles, owner. Frame and stucco construction, concrete floor, metal cash, tile and terrazzo floors—$39,100. ARCHITECT: Daniel, Mann, Johnson & Mendenhall, Los Angeles. GENERAL CONTRACTOR: C. E. Pumphrey, Paso Robles.

OFFICERS MESS BLDG, Stead Air Force Base, Reno, Nevada. Corps of Engineers, U. S. Army, San Francisco, owner. 1-story, wood frame with wood siding, concrete slab floors, facilities for 100 men—$69,541. GENERAL CONTRACTOR: Gilb Const. Co., Oakland.

MEDICAL-DENTAL BLDG, Yuba City, Yuba county. Dr. F. L. Herrick, Yuba City, owner. Addition of 2nd-story to present 1-story bldg., concrete block and frame, frame and stucco construction, asphalt tile floors—$56,965. ARCHITECT: Clarence C. Cuff, Sacramento. GENERAL CONTRACTOR: Lamon Const. Co., Marysville.

CORPORATION YARD BLDG, Salinas, Monterey county. City of Salinas, Salinas, owner.

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.95	3.00	3.00	3.00	3.00	3.00
REINF. STREET	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.30	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

* 6 Hour Day. ** 7 Hour Day. *** Before C.I.S.C for 15c increase.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders' Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

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Frame construction, redwood exterior, some brick veneer, steel sash, shake roof—$60,-483. ARCHITECT: Burner, Holm & Waterman, Salinas. GENERAL CONTRACTOR: F. V. Hampshire, Salinas.

MOTOR LODGE, Reno, Nevada. Cavalier Motor Lodge, Reno. 2-Story, used brick and frame construction, 150x130 ft., 37-units and owner's quarters—$182,420. ARCHITECT: Russell Mills, Reno. GENERAL CONTRACTOR: J. C. Dillard, Reno.

MUSIC BLDG, High School, San Andreas, Calaveras county. Calaveras Joint Union High School District, San Andreas, owner. Frame and stucco construction—$33,655. ARCHITECT: Ernest & Lloyd, Stockton. GENERAL CONTRACTOR: R. W. McClintock, Sonora.

STORE BLDG, Redwood City, San Mateo county. J. C. Penny Co., owner. Addition of second story to present one story building, concrete block and structural steel frame—$64,000. ARCHITECT: Robert D. Liles, San Francisco. GENERAL CONTRACTOR: John J. Burnham, Oakland.

OFFICE & WAREHOUSE, San Jose, Santa Clara county. Bauer & Black Corp. owner. 1-Story structural steel frame, reinforced concrete, steel sash, 32,000 sq. ft. floor space—$139,988. STRUCTURAL ENGINEER: J. Y. Long Co., Oakland. GENERAL CONTRACTOR: Lew Jones Const. Co., San Jose.

PAROCHIAL ELEMENTARY SCHOOL, Los Gatos, Santa Clara county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. 8-Classrooms, administration, library, clinic, toilets, frame and stucco construction. ARCHITECT. Wilton Smith, San Francisco. GENERAL CONTRACTOR: Elmo Pardini, San Jose.

COUNTY LIBRARY, MUSEUM, COMMUNITY LOUNGE, Klamath Falls, Oregon. County of Klamath, Klamath Falls, owner. 2-Story, with basement, 16,300 sq. ft. floor space—$186,000. ARCHITECT: Howard R. Perrin, Klamath Falls. GENERAL CONTRACTOR: Burkhard Construction Co., Klamath Falls, Oregon.

MEDICAL-DENTAL BLDG., Redwood City, San Mateo county. Owner % Architect. One story frame and stucco, brick veneer, asphalt tile floors, composition roof, 4000 sq. ft. of floor space; 6-suites of offices, $49,777. ARCHITECT, William F. Hempel, Palo Alto. GENERAL CONTRACTOR, Schmaling & Stenbit, Palo Alto.

MEN'S GYMNASIUM, Coalinga High School, Fresno county. Coalinga Union High School District, Coalinga, owner. $241,846. ARCHITECT, Walter Wagner, Fresno. GENERAL CONTRACTOR, Larsen-Ratto Const. Co., Fresno.

SOCIAL HALL, Oakland, Alameda county. Temple Beth Abraham, Oakland, owner. Remodel exterior and interior of social hall building, $36,599. ARCHITECT, Warnecke & Warnecke, Oakland. GENERAL CONTRACTOR, Haas & Haynie, San Francisco.

AGRICULTURAL BLDG, Modesto Junior College, Stanislaus county. Modesto Board of Education, Modesto, owner. One story, reinforced concrete tilt-up construction, structural steel frame, poured gypsum, roof deck, colored concrete floor, 18,500 sq. ft. of floor area, $216,000. ARCHITECT: John W. Bomberger, Modesto. GENERAL CONTRACTOR: Floyd G. Borchardt, Stockton.

FARM BUREAU BLDG, Orange. Orange County Farm Bureau, Orange, owner. One story post and beam, frame and stucco filler wall, office building; built up roof, laminated beams, slab and asphalt tile floors, metal sash, interior mahogany panels, forced air heating system, toilets, off-street parking for 90 automobiles, plumbing, electrical work, 6200 sq. ft. floor space, $65,000. ARCHITECT: Harold Gimeno, Santa Ana. GENERAL CONTRACTOR: John M. Dallas, Garden Grove.

SWIMMING POOL, High School, Delano, Kern county. Delano Joint Union High School, Delano, owner. Ell-shaped, reinforced concrete swimming pool; sidewalks, chain link fence; 75x82 ft. $57,500. ARCHITECT: C. D. Alford, Bakersfield. ENGINEER: August E. Wagemann, San Francisco. GENERAL CONTRACTOR: Consolidated Construction Co., Fresno.

OFFICE BLDG ADD'N, Martinez, Contra Costa county. Contra Costa Title Co., Martinez, owner. 1-Story, with basement, reinforced concrete, composition roof, some glass, resilient flooring; 39x90 ft. $97,000. ARCHITECT: Harry J. Nakahara, Martinez. GENERAL CONTRACTOR: MacDonald, Young & Nelson, San Francisco.

SORORITY HOUSE, Alpha Gamma Delta, Berkeley, Alameda county. Alpha Gamma Delta Sorority, Oakland, owner. 3-Story, with basement, frame and stucco construction; $198,000. ARCHITECT: Ponsford & Price, Oakland. GENERAL CONTRACTOR: John E. Branagh & Son, Piedmont.

CEMETERY OFFICE, Holy Cross Cemetery, Colma, San Mateo county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. 1-Story reinforced concrete and frame construction — $110,101. ARCHITECT: Smith & Minton, San Francisco. GENERAL CONTRACTOR: Ira H. Larsen Company, San Francisco.

PERSONNEL HOUSING, Wayside Honor Rancho, Castaic, Los Angeles county. City of Los Angeles, owner. %-dwellings for personnel housing at the Wayside Honor Rancho—$82,400.

DEPARTMENT STORE, Pomona, Los Angeles county. Sears, Roebuck & Co., Chicago, Ill., owner. 1-Story brick and stone; 118,-700 sq. ft. of floor space; composition gravel roofing, concrete floor, metal sash,

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wood and steel studs, flush lighting, painting, plastering, plumbing, electrical work, heating, ventilating, complete air conditioning, acoustical tile ceiling. $1,023,425. ARCHITECT: Stiles Clements, Associated Architects and Engineers, Los Angeles. GENERAL CONTRACTOR: Jackson Bros., Los Angeles.

OFFICE BLDG, Bakersfield, Kern county. Arden Farms, Bakersfield, owner. 1-Story frame and stucco, concrete slab floor, steel sash, asphalt tile floors, 2-walls in refrigeration locker rooms, kitchen—$101,700. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: Tobisch & Columbo, Bakersfield.

HOSPITAL REMODEL, Peralta Hospital, Oakland, Alameda county. Peralta Hospital Association, owner. Alterations to surgical floor and interior remodeling of the 7th floor—$190,000. ARCHITECT: Stone & Mulloy, San Francisco. GENERAL CONTRACTOR: Beckett & Federighi, Oakland.

IN THE NEWS

ARCHITECT SELECTED

The architectural firm of Masten & Hurd of San Francisco, and architect Ned H. Abrams of Sunnyvale, have been selected by the Fremont Union High School District, Sunnyvale, to draft plans and specifications for the construction of a new High School Building in the City of Sunnyvale.

ALASKA DEFENSE CONTRACT AWARD

Determined to get new defense projects started as quickly as possible, the Alaska District Corps of Engineers awarded two major contracts recently.

The Yukon Electric Corpn of Fairbanks, Alaska, was awarded a contract for $746,-060 for construction of electrical distribution systems and Naviad buildings at Ladd and Eielson Air Force bases.

A contract for $36,819 for construction of 17-antenna bases of reinforced concrete and for site clearing was awarded to Clayton & Craig Excavating Co., and Galvin Trucking Co. of Anchorage.

APPOINTED HEAD ARCHITECT

Martin W. Chandler has been appointed head of the Architectural Department of the Kuljian Corpn, Engineers and Constructors of Philadelphia, according to a recent announcement by James L. Cherry, executive vice-president of the firm.

ELEMENTARY SCHOOL BONDS APPROVED

Electors of the Orinda Union Elementary School District of Contra Costa County recently approved issuance of school bonds in the amount of $750,000 with proceeds to be used in construction of an addition to the Sleepy Hollow Elementary School building.

A total of 16 classrooms will be added.

CHURCH FOR PALO ALTO

Work has started on the construction of a combined Church, Sunday School, Chapel and Social Hall building in Palo Alto for the First Presbyterian Church of Palo Alto.

The new building will be of grouted brick and frame construction with a shake roof, concrete floors, radiant heating and forced air heating. Estimated cost is $200,-000.

Leslie I. Nichols of Palo Alto is the architect.

RESIDENTIAL DEVELOPMENT

The Culligan Development Company of San Mateo are constructing 500 frame and stucco residences in Fiesta Gardens, San Mateo county, at an estimated cost of $10,-000 each.

Guy L. Rosebrook of Oakland is the architect.

ARCHITECT MOVES OFFICES

Bruce F. Heiser, A.I.A. architect, has moved into new offices at 251 Post Street, San Francisco. He was formerly located in the Pacific Building.

GLADDING, McBEAN BUSINESS GAINS

Sales of Gladding McBean & Co. are running ahead of last year, according to a recent report of company executives.

The increase is due primarily to expanded use of tile in tract homes, stated Verne W. Boget, vice president in charge of tile, and recently elected president of the Tile Council of America.

HORIZON DOOR OPENS REDWOOD CITY PLANT

The Horizon Door Company, with general offices in Glendale, California, recently opened a factory branch in Redwood City, according to an announcement by E. W. Hamann, who will be in charge of the new plant.

The Redwood City branch of the firm will fabricate, assemble, and glaze their "Horizon" sliding doors and will offer on-the-job installation service.

F. E. Nicholson, formerly of the California Builders Supply of Oakland, has been appointed sales manager of the new plant.

TIMPTE BROTHERS ARE NAMED DISTRIBUTORS

Leo M. Brown, sales manager of St. Paul Hydraulic Hoist, announced the recent appointment of Timpte Brothers. Inc., of Denver, Colorado, distributors for St. Paul Hydraulic Hoists in Colorado and Wyoming, and a portion of New Mexico.

CHARLES H. SCHOLER HEADS AMERICAN CONCRETE INSTITUTE

Charles H. Scholer, head of the Department of Applied Mechanics of Kansas State College was elected president of the American Concrete Institute for 1954 at

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the 50th annual convention of the Institute, recently held in Denver, Colorado.

Prof. Scholer worked on many engineering assignments following graduation from Kansas State College. He has been a member of the ACI since 1924, serving on numerous special committees and the Board of Direction, and vice president. He is also a member of the ASCE, ASTM, NSPE, ASEE, Kansas Engineering Society, the Highway Research Board, Sigma XI, and Phi Kappa Phi.

Other officers elected to serve the ACI during 1954 included: Frank Kerekes, assistant dean, Division of Engineering, Iowa State College, vice-president; Charles S. Whitney, Ammann & Whitney, New York and Milwaukee, vice-president. Directors Phil M. Ferguson, Austin, Texas; Joseph F. Jelley, Washington, D. C.; H. C. Ross, Toronto, Ontario; and George W. Washa, University of Wisconsin.

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ARCHITECT SELECTED

The architectural firm of Higgins & Root, San Jose, has been commissioned by the San Jose Unified School District to draft plans and specifications for the construction of portable classroom buildings to be used by the District in Santa Clara county.

Buildings will be of frame construction.

OAKLAND PLANS FARMERS MARKET

Plans are underway for the construction of a 32-stall Farmers Marker in the City of Oakland at a cost of $250,000.

Included in the development project is a drive-in restaurant. John B. Anthony of San Francisco is the architect.

CHURCH AND OFFICES

Architect Walter R. Hagedohm of Los Angeles, and Lundeberg & Strawn, associated architects, are completing plans for the construction of a 2-story church and administrative office building in Los Angeles at an estimated cost of $200,000.

NEW HIGH SCHOOL

The Mt. View Union High School District is constructing a new Los Altos High School in the city of Los Altos, at an estimated cost of $1,000,000. Of frame and stucco construction the buildings will include 14 classrooms, administration, library, cafeteria, home-economics, kitchen, shower and locker rooms, and toilets.

Clark and Stromquist of Palo Alto are the architects.

GARDEN HOTEL SITE ACQUIRED

Emerson Murfee of San Mateo, recently announced acquisition of property on El Camino Real in San Mateo, upon which he will construct a 100-unit Garden Motel at an estimated cost of $1,000,000. Facilities will also include a swimming pool.

SCHOOL BONDS DEFEATED

Electors of the Sequoia Union High School District of Redwood City, recently rejected a proposal to issue $2,700,000 in special school bonds for the purpose of constructing a new high school building in Woodside, San Mateo county.

AL BRINKMAN JOINS WARD DURGIN FIRM

Ward Durgin recently announced the association of Al. Brinkman with the Ward Durgin Construction Service, San Francisco.

Brinkman will serve the firm as Field Engineer and Sales Representative, and will cover the San Francisco Bay area specializing in Stran-Steel framing.

LIBRARY BUILDING

Architect Roy C. Wilson of Santa Paula, has completed preliminary plans for the construction of a new Library Building in the City of Santa Paula for the Ventura County Board of Supervisors.

Estimated cost of the building is $44,000.

KRAFTILE EXPANDS

The Kraftile Company, Niles, has started construction of an addition to their factory and will soon install a quantity of

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new equipment, according to Chas. Kraft, president of the building materials manufacturing firm, who declared the expansion and modernization program was a part of Kraftile's policy to better serve the construction industry of the West.

Estimated cost of the project is $500,000.

NEW CITY OFFICES FOR EL MONTE

The architectural firm of Anthony & Ellis, Architects and Engineers, are completing plans for the construction of a new 1-story, reinforced concrete City Hall and Police Station for the City of El Monte.

The buildings will contain 22,734 sq. ft. of floor space, and will cost an estimated $420,000.

MEMORIAL HALL

The Terra Bella Veterans Memorial District, Tulare county, is completing plans for the construction of a Memorial building in the city of Terra Bella, comprising offices, auditorium, and other recreational facilities.

Robert C. Kaestner of Visalia is the architect. Estimated cost of the project is $96,000.

CHURCH BUILDING

The Revival Center Church of Long Beach has completed plans for the construction of a new Church Building in the City of Long Beach, containing 12,300 sq. ft., at an estimated cost of $39,000.

The firm of Montrierth & Strickland, Long Beach, is doing the architectural work and preparing plans and specifications.

METHODIST HOSPITAL

The Methodist Church, Southern California and Arizona Conference,. recently announced plans for the construction of a multiple story, reinforced concrete hospital in the City of Arcadia.

The first unit will provide 125 beds and facilities for future expansion to 300 beds. Estimated cost of the first unit is $1,700,000.

The firm of Neptune & Thomas of Pasadena are preparing plans.

OAKLAND APARTMENT

Plans have been announced for the construction in the near future of an 11-story reinforced concrete, Class A, apartment building in the City of Oakland, at an estimated cost of $1,000,000.

Architect John B. Anthony, Oakland, and E. K. McKesson, Structural Engineer, have been retained to design the building.

BANK FOR STOCKTON

The Anglo-California National Bank, with general offices in San Francisco, have announced plans for the construction of a new Bank Building in the City of Stockton.

The building will be 2-story, with basement, and will cost an estimated $500,000.

Mayo & Johnson & De Wolf, of Stockton, are the architects.

ARCHITECT SELECTED

The architectural firm of Meyer & Evers, San Francisco, has been commissioned by the Delta District Company of Stockton, to design an office, warehouse, garage and shop building for the firm on the Stockton highway.

The building will be 1-story, reinforced concrete, tilt-up construction.

ANDREW J. JONES IS NAMED SALES MANAGER

Andrew J. Jones, formerly with the Gilmore Steel & Supply Co., has been appointed district sales manager for Roylyn, Inc.

Jones will have charge of the northern California area.

UTAH CONSTRUCTION SPLITS STOCK

Stockholders of Utah Construction approved a five-for-one stock split and elected Allen D. Christensen president, succeeding Lester S. Corey who retired, at the company's recent annual meeting.

Christensen has served as executive vice president since 1951.

HARVEY HEWITT RETIRES

Harvey Hewitt, vice-president in charge of sales for the Bethlehem Pacific Coast

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Steel Corpn, retired on Feb. 1st after 30 years of service with the company. He is succeeded by Stewart S. Cort, general manager of sales.

ARCHITECT SELECTED

Harry J. Devine, Architect of Sacramento, has been selected by the Board of Supervisors of Sutter county, to design a 45-bed addition to the Sutter County Hospital in Yuba City.

NEW GAS VENT PIPE

Designed especially for "in-the-wall" ventilating; the pipe has a narrow, oval cross section permitting easy installation inside a wall without extensive special construction or extra insulation.

This new WV features an inner and outer pipe separated by an insulating air space; new "Fastloc" coupler enables pipe sections to be joined without cement or mastic, and without screws except where vent will be left exposed in rooms. Outer pipe is galvanized steel, aluminum is used for the inner pipe to provide fast heating inner "hot-stack" with maximum corrosion resistance. Manufactured by Metalbestos Division, William Wallace Co., Belmont, California.

ARCHITECTURAL FIRM ORGANIZED

Announcement has been made of the formation of the Gromme, Mulvin & Priestly architectural firm, with general offices at 110 Sutter Street, San Francisco. The new organization will engage in the general practice of architecture.

SCHOOL BONDS APPROVED

Voters of the Palos Verdes School District, Los Angeles country, recently approved a school bond issue of $115,000, which with a State loan of $475,000, will be used to finance the construction of a 16-classroom school building in the Dapplegray Lane District, and to repair the Malaga Cove and Miraleste schools.

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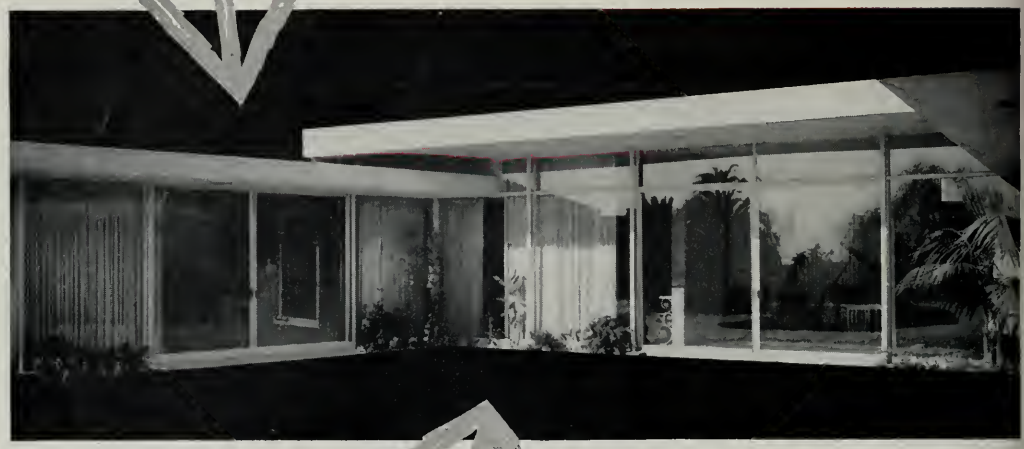

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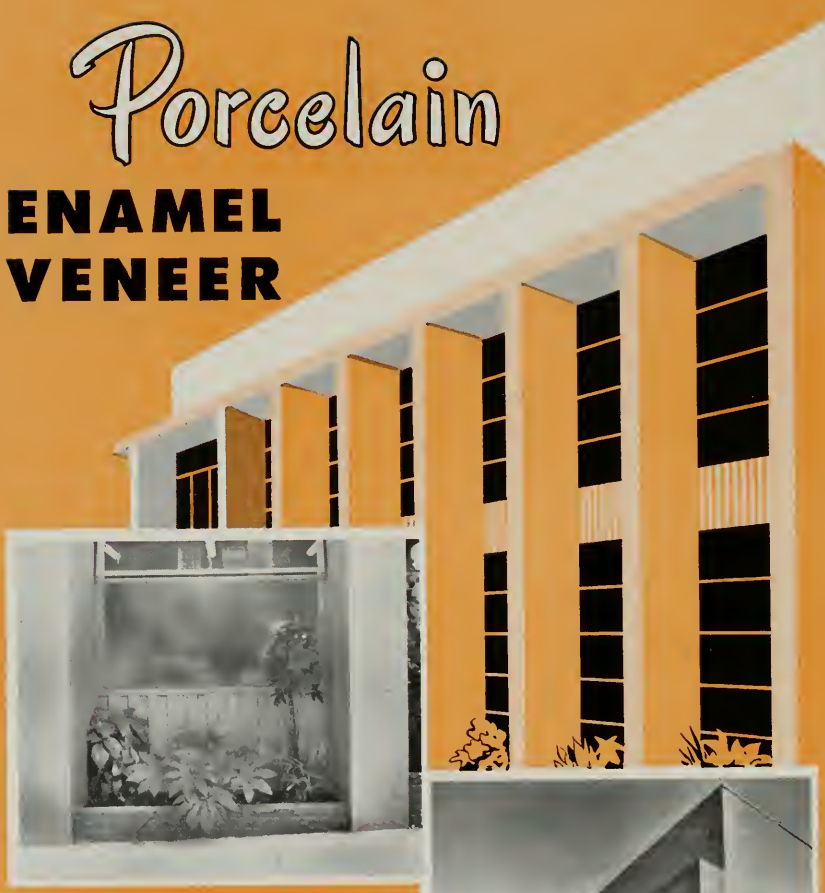
ARCHITECT AND ENGINEER

WILLAMETTE RIVER VALLEY . . . From Living Room

GEORGE WISEMAN, Architect

APRIL 1954

Porcelain ENAMEL VENEER



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Vol. 197 No. 1

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COVER PICTURE

FRED W. BRUNNER
RURAL RESIDENCE
LOWER BRAES

(Eugene, Oregon)

GEORGE WISEMAN, Architect

Site of this lovely, new non-metropolitan home is on a hill-side overlooking the famed Willamette River valley, five miles west of the city of Eugene, Oregon.

Located on a five-acre wooded tract, the architect utilized to the fullest extent the terrain and scenic opportunities in designing this home. For further details, photographs and story see Page 16.

Photos by TOM BURNS, JR.

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. EDITORIAL NOTES .

FOOT-IN-DOOR SPENDING

Here's how it works! A bill is introduced to authorize a new program or project. Little if anything is said about what it will cost, except maybe for planning purposes, until after it is passed. Then the Appropriations Committee are told: "The Congress approved this project. Obviously, it is the will of Congress that you do your duty and grant the money." A first-year appropriation for a small amount is quite likely to be approved. In the next year a new request comes in for many millions and the Committees are told that it would be wasteful and inefficient to drop the project midway in its construction. Under these circumstances the many millions are usually granted.

Currently there are about 1400 authorizations in the field of river, harbor, and flood control alone, and the 1954 Budget indicates $14-billion will have to be appropriated in future years to complete the civil works projects already started. In addition about $17.7-billion of construction work has been authorized and may be undertaken during and after Fiscal 1954, if funds are provided.

These facts emphasize the necessity for the thorough review of all federal spending which is to be undertaken by the new Hoover Commission. It should result in many taxpayer savings.

* * *

Since World War II the number of families in the U. S. has increased 800,000 per year, twice the rate of increase during the '30's.

* * *

OPEN END MORTGAGES

One of the simplest, cheapest and most convenient methods of financing improvements to an existing house is by an "open-end" mortgage arrangement.

An "open-end" mortgage allows the homeowner to re-borrow the money he has paid off on his mortgage. In some cases, where the newly-assessed value of the house exceeds the amount of the original mortgage, he is permitted to borrow even more than he has paid in.

Payments on the new loan can be handled in one of two ways. Most common is to spread the payments over the remaining period of the mortgage contract, adding them to the regular mortgage payments. Or the mortgage contract may be extended for several years, in which case the payments do not increase, but merely go on for a longer period.

Not only does the "open-end" mortgage provide low-interest credit, but it also reduces the amount of monthly payments by up to 80 percent. For instance, $1,000 borrowed for the maximum of three years, would entail payments of something like $31 per month. Borrowed from the mortgagor and added to an "open-end" mortgage which had ten years left to run, payments on the same $1000 would amount to only $10 monthly.

More than 75 percent of U. S. homes are over 20 years old. If home owners could be made aware of the vast amount of cheap credit that is available to them, many a housewife would be enjoying that extra bath room or utility room she has been longing for.

"Open-end" mortgage financing appeals to bankers because they are familiar with the stability of the borrower, having held his mortgage for some years. This makes credit investigation unnecessary and eliminates most of the risk involved in making loans. It allows lenders to put more money to work in the safest possible way.

* * *

Stainless steel production figures for 1953 show an all-time high of 1,015,303 tons. Architectural use was up 47 per cent.

* * *

SELECTING A NEW HOME

What do you have to know to buy a new home?

Certainly you should be able to judge the quality of construction and to decide whether the house layout best suits your requirements for comfortable living.

It would also help if you could know how much the home is going to cost to maintain, and how much of that maintenance cost will descend on you in the next five years.

Fortunately, you don't have to be a soothsayer or a prophet in order to figure out some of the answers for yourself. If you look at the construction and materials objectively, not being influenced by the frills that frequently attract many buyers, you can predict with reasonable accuracy whether your maintenance bills will be high or low.

For example, how are the sub-floors laid and supported?

Heavy traffic areas in the kitchen, bathroom, and halls should be covered with durable, easy-to-clean materials that won't wear out in two or three years.

Hair line cracks in the plaster of a new home don't indicate any serious defect, but cracks that extend over an entire wall and go all the way through the plaster indicate structural defects that may lead to expensive repairs in the not too distant future.

Consider some of these factors when you are appraising your future home. If the answers are favorable, you can buy with reasonable assurance that the cost of maintaining it will stay within your budget and it will be a source of happiness for the entire family.

Know your Architect and your builder.

COLLEGIATE

168 TROFFER

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FACTORIES

HOW GOOD LIGHTING PAYS

DIVIDENDS

THESE ARE FACTS!

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OFFICE AND WAREHOUSE SAN FRANCISCO

NEWS and COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

Located in Lincoln Park, San Francisco, and under the direction of Thomas Carr Howe, Jr., a special group of exhibitions has been arranged for April, including:

EXHIBITIONS: Seventy-Eight Years of Magnin Elegance—a special loan exhibition of mannequins portraying the important "fashion years" from 1876 to 1954. Assembled by I. Magnin and Company, the exhibition will be inaugurated on public exhibition April 28; Contemporary British Lithographs, 1948-1952, lent by The Museum of Modern Art, New York City; Paintings on Glass, by Martha Huth; The Albert D. Lasker Collection of French Paintings; and Paintings by Oskar Kokoschka.

EVENTS: A Post-Easter Concert on Sunday, April 25, will feature the Dominican College Chorus, conducted by Dr. Giovanni Camajani and organist Ludwig Altman, giving the first local performance of D'Indy's cantata, Mary Magdalene.

The Achenbach Foundation for Graphic Arts, at the Museum, will feature Jose Guadalupe Posada—Artist of the People, and Views of Venice—four centuries in Prints. The Loan Exhibition at the San Francisco Public Library will be "Man's Architectural Homage to His God" and will show the master cathe-

M. H. deYOUNG MEMORIAL MUSEUM

Golden Gate Park

San Francisco

"PORTRAIT OF A LADY"

By

Anthony Van Dyck

(1599-1641)

This superb portrait wos painted by the brilliant Flemish artist in 1620 or 1621 at the close of Van Dyck's first Antwerp periad and at the end of his close associatian with Rubens.

Added to the Permanent Collectian af the M. H. deYoung Memorial Museum, the gift of Roscoe and Margaret Oakes.

drals of the world as recorded by the great printmakers of the past five centuries.

Motion Picture Series, each Saturday at 2:30 p.m.; Organ Program each Saturday and Sunday at 3 o'clock and Educational Activities including Painting Classes for Children each Saturday morning.

Museum is open daily 10 a.m. to 5 p.m.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is featuring the Twelfth Annual Pacific Coast Textile Exhibition, comprising the work of twenty-four textile artists. Highlight of this year's event is the Rotunda House of Six Rooms, designed by decorators from the City of Paris in cooperation with six weavers. Included in the room arrangement is a "Living Room," a "Lanai," "Man's Library," "Dining Room," and "Sitting Room-Kitchen."

Jacques Requet served as Coordinator of the exhibit; Andre Laherrere was in charge of the Background Plan, and participating were: Ellen Alexander, Lynn Alexander, Rosemary Antonacci, James Baughman, Ernestine Bcleal, Beatrice Barnardi, Ida Dean, Hilda Dial, Mary Dumas, Kay Geary, Win Grear, Marge Krejcik, Flora Milligan, Frances Morgan, all textiles.

Marta Page, Mary Walker Phillips, Margarita Robinson, Edward Rossbach, Kay Keiko Sekimachi, Marion Stewart, Siminoff, H. B. Tilton, Katherine Westphal, and Jean Wilson "designed for planned weaving."

The Pictures of the Month are a group of Paintings by Antonia Sotomayor, featuring Pan-American Week.

WOMEN'S AUXILIARY OF ART MUSEUM PLANS HOUSE TOUR

The Women's Auxiliary of the San Francisco Art Association will conduct a house tour of Russian Hill homes on Tuesday, May 4th. Following the tour tea will be served at the California School of Fine Arts, 800 Chestnut Street.

Officers of the Auxiliary for 1954 include: Mrs. Arthur B. Dunne, Chairman; Mrs. Prentis Cobb Hale, Jr.; Mrs. Richard C. Ham, and Mrs. John Parks Davis. Information concerning the tour may be obtained from Mrs. Dunne.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering an appropriate schedule of exhibitions and special events in conjunction with Spring. April 30 is the final day donations will be accepted for the annual Treasure Hunt Auction Sale of the deYoung Museum Society. Items will be previewed May 22-23-24, and the Sale held May 26-27-28.

EXHIBITIONS: Collages by Jean Varda; Etchings by Cadwallader Washburn—a retrospect exhibition lent by Dr. Ludwig Emge; Lilian Miller, 1895-1943, a collection of Color Woodcuts; Recent Donations; Photographs by Peter Fink; "Into the Child's World" — The 5th Annual Exhibition of the San Francisco Young Children's Art Show.

SPECIAL EVENTS include classes in "Painting for Pleasure" and "Exercises in Perception" for beginners, May 1 and 15; an opportunity, by learning to paint, to develop a more active enjoyment of art and of all visual experience. Arts and Ideas—A study of the changing picture of reality, continues through April. Painting Workshop — classes in painting from the model for the practice of observation and appreciation, Thursday and Saturday afternoon. Classes for Children—Picture Making, Art and Nature, and the Art Club.

The Museum is open daily, 10 a.m. to 5 p.m.

ABRAHAM ROSENBERG FELLOWSHIP IN ART AWARDED TO DIEBENKORN

Richard Diebenkorn has been awarded the 1954 Abraham Rosenberg Fellowship in Art, according to an announcement by the Board of Directors of the San Francisco Art Association.

The Fellowship is awarded annually in the amount of $2,400 to a mature artist to assist him in carrying out approved projects in the fields of painting or sculpture.

Diebenkorn was one of twenty applicants for the award. Members of the Awards Jury included: David Park, Chairman; Ruth Armer, Alfred Frankenstein, Karl Kasten, Ward Lockwood, Dr. Grace McCann Morley and Nell Sinton.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is featuring an interesting group of exhibitions and events for April.

EXHIBITIONS: Light and Color—honoring the Diamond Jubilee of electric light and including a demonstration of home lighting today; Art Festival Purchase, from the collection of the San Francisco Art Commission; Four Artist-Craftsmen, showing the work of Marguerite Wildenhain, Ida Dean, Merry Renk, and Ruth Asawa; Children's Paintings from 45 Coun-

(See page 34)

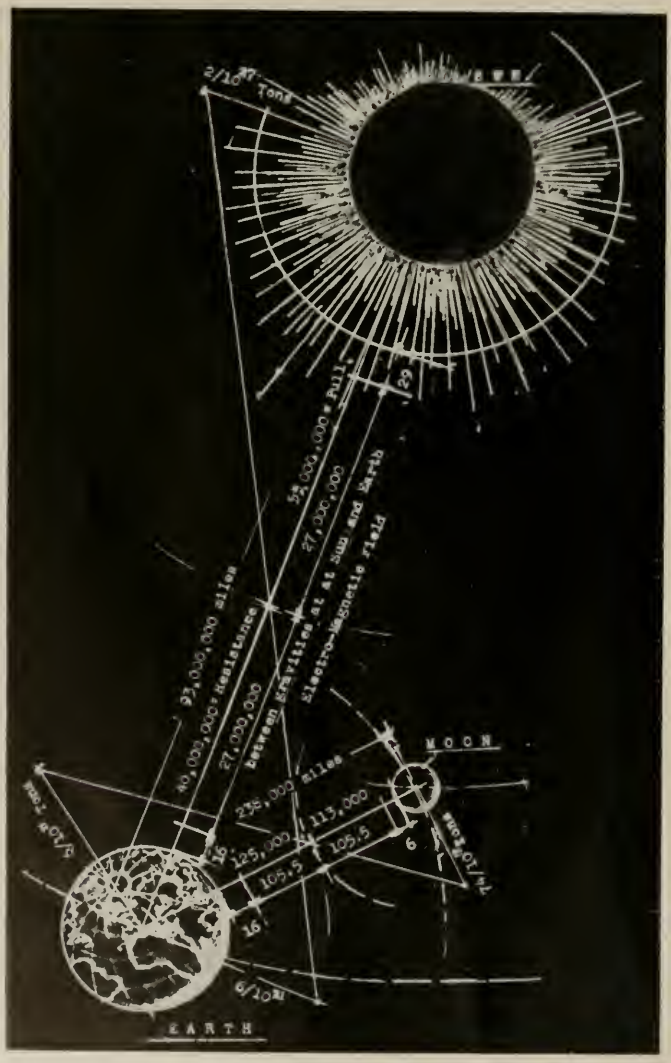
GRAVITY

AND THE ELECTRO-MAGNETIZED COSMOS

By ANTHONY McF. McSWEENEY
A.I.A. Architect

The unknown magnetic-electric force that is generated by the revolving of our planet and the countless other planets that make up the firmaments might be compared with dynamos that give off their energies intermeshing with and apparently dependent upon each other.

What started them and what keeps them revolving in their different orbits we cannot attribute to natural causes.



It is evidently one of the mysteries of The Divine Creator wherein the countless stars and planets were so spaced for weight, bulk and distance as to keep them in their correct positions so that they could travel in their orbits and not interfere with each other.

My theory is, that heat and cold are just some of the elements involved.

Heat from the sun on the sun side of a planet expands that side and causes it to spin on its axis forcing the lighter and colder towards the heat of the sun. Continuing motion would produce an electric current similar to an ordinary dynamo.

Millions of these suns, planets and satellites in separated positions in space would add to this electrical charging of the endless space, developing what might be termed an electro-magnetic field, forcing them to move forward in a curved direction, which coupled with the attractive power of larger bodies over proportionately smaller and less weighty, would, in a way, account for the different orbits.

The graph, showing my method of determining the pivotal points between the sun and the earth, and the earth and the moon caused by their mass or weights on either ends, is a simple example of equilibrium.

It will be noted that the distance on each side of the weights is different until we deduct the determined gravities from each side.

When this is done the distance from the respective gravities on each side to the pivotal point always becomes equal; hence the total distances from gravities I have designated the electro-magnetic field.

Any two or more planets or satellites may be subjected to the same methods of solution after their distances, weights and gravities are determined.

All celestial forces are proportionately uniform. They are the same forces from the sun that control all the planets in our firmament as far away as Pluto (4,000,000,000 miles) from the sun; the same two-way forces that send comets beyond the orbit of Neptune (3,000,000,000 miles) and then draw them back and around and again by a repelling force, send them perpetually on similar journeys.

Similar forces cause satellites of the same controlling planet to describe orbits opposite from that of their sister satellites.

The magneto-electrical space of field seems to be regarded as a cosmic jungle and apears to have caused astronomical mathematicians many years of fruitless research efforts.

A light year is 186,000 miles a second, times the 31,000,000 seconds that make a year, or 6,000,000,000,000 miles.

Some of the distances between stars or suns are said to be several billions of light years.

Remote distances are measureless, forcing us to substitute spectroscopic photography, assigning color values for distances. This applies only to stars that can be photographed.

In and beyond the Megallanic clouds of stars we begin to lose confidence as to the correctness of our computations.

The human imagination is stunned by

(See page 36)

"MANUFACTURERS' LITERATURE—
From Mail Basket to Waste Basket"

1954 CONVENTION THEME OF THE CALIFORNIA COUNCIL of ARCHITECTS

In an attempt to do something about the recently published remarks of the internationally known architectural writer and critic, Sigfried Giedon, that "the immense apparatus of the building industry stands between the architect and architecture," F. Bourn Hayne, A.I.A. architect, manager for the 1954 annual convention of the California Council of Architects, assisted by Vincent Raney, A.I.A. architect, Program Chairman, has decided that the theme for the approaching conferences at Hoberg's Resort in Lake County will be "Manufacturers' Literature--From Mail Basket to Waste Basket."

Architects Hayne and Raney will select a panel made up of representatives of advertising agencies, manufacturers of building material, and editors of architectural magazines, contractors, engineers, specification writers and architects so that each of these important elements of the building industry may voice praise or protest at the status quo and make helpful suggestions whereby a simple, workable system may be developed for the presentation, distribution and filing of building material facts which will be of benefit to all concerned.

With this "star cast" panel scheduled at present for the afternoon of Thursday, September 30th, the opening day of the convention, it is the hope of the manager and program chairman that an atmosphere of lively interchange of professional needs and thoughts will continue throughout the three day gathering. Raney plans to have his program committeemen the chairmen of the several regular Council committees, so that all convention guests may be able to sit in on the various discussions concerning the profession and on Saturday, the final day of the convention, many suggestions and resolutions can be presented to the Executive Board of the Council.

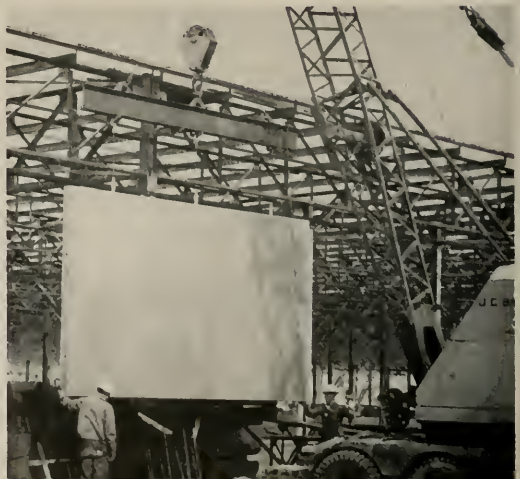
Although serious and important subjects are scheduled to be presented, the convention manager is not losing sight of the need for gaiety and relaxation. Con-

SPECIAL "A" FRAME TRUCKS ARE USED TO TRANSPORT PRECAST PANELS TO JOB SITE. SLABS ARE HANDLED ON THE VERTICAL.

PRE-CAST CONCRETE WALL PANELS AND CHANNEL SLABS

A SIMPLIFIED MEANS OF CONSTRUCTING THE WEST'S LARGEST FORD MOTOR PLANT

An old Chinese proverb tells us "A picture is worth 10,000 words." If such is true, then the following 19-picture story on the manufacture, transportation, and installation of PRE-CAST Concrete Wall Panels and concrete CHANNEL SLABS will give you a 190,000 word-picture of this new, simplified and ecanomical means of constructing enduring concrete buildings.



PANELS ARE LIFTED BY CRANE DIRECT FROM TRUCK FOR JOB SEQUENCE PLACE.

CONSTRUCTION ENGINEERS Inspect the work.

Pre-cast concrete panels which were fabricated at Napa plant of the Basalt Rock Co. are being given routine installatian inspectian by Jack Streblaw, manager, Pre-Cast Division of Basalt Co. (left); George Sweeney, resident engineer, Ford Motor Co., Detrait, Michigan; and Chester Baldwin, engineer and project manager for J. H. Pomeroy & Co., Inc., San Francisco, general contractors of canstructian.

SOUTH SIDE OF NEW FORD PLANT, SHOWING PANELS IN PLACE. THE JOINTS ARE SEALED WITH MASTIC.

Another Use

CALIFORNIA STATE EMPLOYMENT OFFICE

Sacromenta

Temporary building of heavy-weight concrete curtain walls bolted to steel columns. The wall joints are sealed with mastic.

Maximum size panel was 21'9" long x 8'9" high.

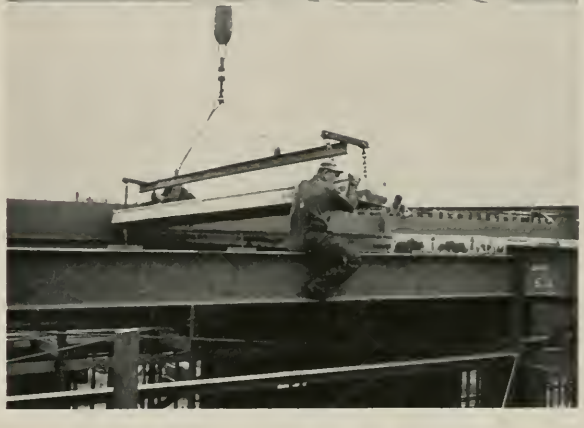
6,500 sq. ft. of wall was installed in approximately 16 hours.

Ends were cast on slab with 3" corner return.

IN THE MANUFACTURING

Placing dolly (top) used for placing Channel Slabs in areas where crane is unable to reach.

Placement of channel slabs of 20 foot span on girders by crane.



SECTION (Below)

A section of a new channel slab roof showing installation nearing completion.

TABLE ASSEMBLED

With steel reinforcing and sash to be poured.

WELDING RETAINING PLATE (right) on reinforced rods for fixed anchorage. Plates hold tension on rods after forms are stripped.

TABLE filled with concrete being placed by special vibrating screed. Table also vibrates to help proper placements.

OVERHEAD ELECTRIC CRANE

Picks up stripped panel and carries it to curing chamber at end of manufacturing plant.

WALL PANEL ready for stripping. Table "tilts" to vertical positions to allow panel to be handled in this position until installed in walls.

GROUP of tables in Pre-Cast assembly plant in various stages of wall panel construction.

BATTERY OF CHANNEL SLAB MOLDS

View shows molds with reinforcing in place ready to be filled with lightweight concrete.

Crane picks up poured slabs (below) and takes them to "pits" where they are cured prior to installation.

"Curing" includes temperature and humidity control process plus thorough inspection.

PANELS
IN
CURING PITS

Panels are placed in these temperature and humidity controlled "pits" for a process of accelerated curing, prior to transportation to job site and installation.

View of "Pre-Cast Wall Panel" and "Channel Slab" plant of Basalt Rock Company at Napa, California.

Against a Wooded Oregon Hillside . . . Nestles the Brunner Home

FRED W. BRUNNER'S HOME ON HILLSIDE SITE EXPLOITED TO FULLEST

EUGENE, OREGON

GEORGE WISEMAN, Architect

By ARTHUR W. PRIAULX

When Architect George Wiseman designed the lovely Fred W. Brunner home in the Lower Braes five miles west of Eugene, Oregon, he exploited the five-acre wooded site to the maximum.

To insure complete privacy, he selected a location almost in the dead center of the holdings, which happened to be the only bare spot free of

Entrance is Sheltered by Overhang.

trees and shrubs. The home is reached by a winding dirt and graveled road.

First problem was to utilize site, which he did by designing a home that nestles down in its wooded surroundings with charming affinity. The house is on two levels with carport, garage, utility rooms, furnace and a spare room reached around a corner of the hill from the entrance to the main level.

A loggers' oil finish to retain the natural grain and texture of the Western red cedar drop siding is the first step in building a home to match its forest surroundings. Another feature is a full wall-to-wall and ceiling-to-floor glass wall in the living room which looks out through a private chink in the trees to give a breathless view of a large portion of the Willamette valley out below and Eugene in the short foreground.

The full glass wall brings woodsy outdoors right into the living room.

A ten-foot overhanging eave or extension of the roof line of the home, protects the living room glass wall from the weather as well as providing a shelter for a delightful patio and lounging area. A feature of this part of the home is a Swedish fire-

Striking tile floor entrance-way with fireplace directly in front of visitor as he enters house of cedar. Exposed beams are of fir.

Wide overhang of roof extension shelters patio in all kinds of weather. Lovely Swedish fireplace at right of glass wall has decorative and utilitarian value.

place and chimney tucked into a short recess corner of the patio.

Another distinguishing aspect of this home is the manner in which Architect Wiseman has created an effect of extra spaciousness by grouping together kitchen, dining room and living room into one expansive living area. The effect of space and elbow room has been accentuated by use of red cedar walls in various patterns. The screen between kitchen and dining areas is very slight, merely a cedar book shelf built around the electric range for a separating device. A rather large unbroken opening joins dining and living areas. Kitchen is separated by a full heighth pantry which becomes a linen storage space on the dining room side.

Picture windows along both south and east walls serving kitchen and dining room give a sweeping view of the valley from another angle. Vertical cedar siding with a V-joint and clear finish has been used throughout those two rooms including pantry, storage, cupboard and built-ins. Indirect lighting over the kitchen work benches is supplied by a fluorescent light in deep covered recess beneath the upper dish cupboards.

Ceiling of these two rooms is one-by-six fir decking with three-by-eight inch fir joists left exposed. These are also clear finished to retain the natural wood color and grain as part of the plan to absorb the flavor of the forests in the home. Oak puncheon floors in random width have been used throughout kitchen, dining and living areas.

The living room is a singular creation for easy contemporary living. Walls are V-joint red cedar siding applied horizontally. Ceiling is exposed decking of fir with the three-by-eight fir beams also left exposed. All has been clear finished to capture the informal character of these two woods.

Double french doors open onto the all-weather patio protected by the extra wide ten foot overhanging eaves. Here, too, the natural wood beams and ceilings have been finished in the clear.

Following the theme of the 'open' house, a hallway leads away from the living room without door or screen at the entrance. This heightens the feeling of expanse in the home. The entrance is

View of the uphill side of the Brunner home where it faces privote driveway, emphosizes way in which the attroctive residence form-fits the gentle sloping hill.

attractive and somewhat sets the pace for the rest of the home. You enter under wide overhanging eaves through a large flush door flanked on one side by a brick planter which starts in the outer entry and extends into the living area about four feet. The illusion is perfect, although the planter does not actually break the wall line.

In front of the entrance and forming the north wall of the living room is a ceiling height fireplace made of old brick, carefully cleaned, to give character and texture. A full length copper hood adds to the unusual tone of the room. Ceiling of the living room is sloping to follow roof contour, being highest at the glass wall side. A red tile floor covers the entrance way, a boon in this country where rain is plentiful and easy to track into the home. The tile floor continues on in front of the fireplace, a nice protection from flying sparks A narrow recess panel at one side of the fireplace in the brick section provides wood storage.

The V-joint vertical red cedar walls in the hallway follow the cedar theme of the home. The

Knotty-pine woodwork is a feature of built-in cabinets and walls of the bathroom.

The dining room from the kitchen . . . clear, sweeping view of the Willamette River Valley through a screen of trees is seen.

decking ceiling in the hall has been painted a light green to lighten up this portion of the home. A cedar bookcase makes up a part of one hallway wall and linen storage forms part of the other side.

Knotty pine has been used effectively in the rather interestingly designed bathroom. It was finished first with white which was wiped off and then three coats of dull varnish were applied. This withstands steam, heat and moisture conditions of the bath.

The master bedroom has a low gabled ceiling and here the beams and fir decking have been painted a light green. V-joint red cedar walls applied horizontally make up three walls of this home and the third wall is papered to the roofline and the gabled end is red cedar. Here again the central theme of the home has been carefully followed. Aromatic cedar linings cover the walls of a walk-in closet which occupies nearly all one wall.

A small bedroom den has been finished with walls papered. The exposed ceiling beams and decking is finished in natural clear. Top trim is of cedar. All floors in the bedrooms and hallway are two-inch oak.

The Brunner home has a number of interesting features which make it more livable and bring out the individuality of the owners. On the entrance, or west side of the home, small windows in groupings of three serve kitchen, bath, master bedroom, and a four grouping of the same size serves the living area, to afford maximum privacy. These are standard factory sash windows and the center window only in each group opens on side hinges.

A rather intriguing effect is obtained by using one-by-eight stepping for a fascia board along the eaves to hide gutter and roof line. Placed at an angle sloping inward, a most pleasing and finished appearance is had.

The roof is built up gravel surfacing laid over

Cedar kitchen seen from living room archway, corner of dining room, left . . . Wall of bookcases forms dividing line between dining and cooking areas—backed against electric range.

roof insulation which in turn rests on the one-by six fir decking. The decking serves a double purpose as roof boards and ceilings in every room. The slope of roof is pitched gently upward from the west side to extend out over the patio. The lines of the home are highlighted by this "eye-shade" roof extension.

Another innovation to prevent fogging of the picture windows in the living room during cold days has been the installation of the heat vent directly beneath the windows. The effect is like a defroster on a car and the windows have never steamed or fogged up regardless of the severity of temperature changes or the variance in temperature between the home and outdoors.

Drainage tile has been laid all the way around the uphill side of the home to prevent water damage through the concrete walls and water stagnation. There has been no trouble with water.

A built-in bookcase and storage cabinet to match the red cedar walls has been made a part of one corner of the living room away from the fireplace.

The contemporary ranch type home, such as Architect Wiseman has designed for the Brunners reaches its finest form when full use is made of the fine qualities of the native materials. The cedars, firs and hemlocks belong to this country, Mr. and Mrs. Brunner point out, so we decided to make the most possible use of these beautiful natural substances. The grain, texture, color and warmth of cedar caught our eye, they said, and the decision to use cedar throughout the interior of the home was a most happy thought.

"We left the cedar as near its natural color as we could," Mrs. Brunner pointed out. "In so doing, we believe we have captured something very near the perfect home for our land. The soft grain and texture of cedar, the old used brick, copper, red tile and glass walls all blend into a perfect creation, a sort of rich, woodsy-flavored symphony that reaches out to the surrounding forests."

Master bedroom has exposed beam pitched roof . . . papered walls on north side sets off cedar walls in rest of room . . . Gloss wall toward private garden and individual entrance.

REMODELED RECEPTION AND DISPLAY AREA.

REMODEL McGRAW-HILL PUBLISHERS DISPLAY AND RECEPTION ROOM

San Francisco, California

General offices for the McGraw-Hill Publishers in San Francisco have been maintained at 68 Post street since 1939, and until recently when the activities of the office expanded considerably, ample space and facilities provided for normal conduct of the firm's business.

With the increased volume of business it was felt that the large reception area was inadequate to meet the newer conditions in many respects, so arrangements were made for a complete remodeling of the area.

The essential requirements consisted of the need for more bookshelf area, a more efficient lighting system, adequate display for numerous magazines and publications, and a generally modern, up-to-date interior design that would be in keeping with the continued progress of the company.

It was decided to eliminate all existing metal shelving and install the maximum amount of hardwood shelves. The wood chosen for the entire room was walnut, and this included new slab doors, paneling and shelving. An unsightly existing column and mail chute which could not be removed presented an opportunity for the designers to develop this area on all sides as the accent feature of the room. A built-in reading table, attractive magazine racks, additional shelving and a sign and planter were all incorporated in this previously non-functional area.

The entire ceiling and lighting treatment was revamped, and an Acusti-Luminus Ceiling was installed consisting of suspended light metal channels supporting corrugated white plastic sheets. Mounted to the existing ceiling were 52 three foot 40 watt fluorescent strip fixtures, providing complete light diffusion and

Photos Courtesy
FINK & SCHINDLER CO.
Fixture Manufacturer

Phil Fein,
Photographer

an equal intensity of light throughout the room.

Color is obtained in the room by the base used under all bookshelves and on the desk and table tops. Perforated metal sheets painted rust were used as decorative features on the desk, sign, radiator enclosure and enclosed magazine shelves. The floor is black vinyl tile.

Woven wood draperies at the windows and the use of chain webbing in the chairs add additional interest to the room. The piece of planted architectural pottery and the birch magazine racks highlighted by spot lighting create a pleasant and interesting approach as one steps from the elevators.

VIEW OF RECEPTION AND DISPLAY . . . before alterations.

Photo Courtesy Kawneer Co.

TYPHOON WEATHER CONDITIONS DEVELOPED FOR MATERIALS TEST

90-MILE PER HOUR WINDS, TORRENTIAL RAINS USED IN BUILDING MATERIALS TEST AT EMERYVILLE

Lashing winds of velocities up to 90 miles per hour together with a torrent of water threatened to uproot an isolated area in the City of Emeryville, California, recently when a carefully arranged, man-made hurricane, created by a group of leading engineers in the construction field, was used to run a storm endurance test on a newly designed exterior window wall panel. The panels, designed by San Francisco architects A. J. Loubet and W. G. Glynn, were developed and fabricated by the Reynolds Metal Co. of San Francisco for installation in the new 25-story office building now being constructed on the corner of Montgomery and Sutter streets in San Francisco's financial district for the Equitable Insurance Company.

A huge 2000 h.p. airplane type engine, mounted on a mobile test stand, was set up to simulate the battering effects of nature loosened on an all-out destructive rampage. Buffeting the special observation tower upon which the panels had been mounted, as illustrated above, with all the combined fury of a South Pacific typhoon and a Florida hurricane, the rigid test gave the designers, construction engineers, and building material manufacturers an unequalled opportunity to study the wall sections under the worst possible storm conditions.

The panels tested consist of a new type of hurricane window engineered to make prominent use of stainless steel and aluminum products, with the added feature of a refreshing dignity of design which will contribute to the pleasing appearance of the building, and a feature not seen before in Western construction of the type of the Equitable building.

The design incorporated in the structure divorces completely the exterior walls from the skeletal steel structure and in so doing opens up a new vista of building economy and speed of erection heretofore thought impossible. The building itself includes safety features and earthquake safeguards far surpassing any similar size building constructed in the West.

Participating in the test were: A. D. Reynolds and Gene Renner, Reynolds Metals Co.; Curtis Smith, vice-president of the Dinwiddie Construction Comany, General Contractors on the Equitablpe building. Smith prepared the test site and cooperated in staging the experiments; H. W. Lindholm, superintendent of construction for the Equitable Company; Otis H. Win-

field, vice-president and general manager of the West Coast operations for the Kawneer Company. Winfield served as the general supervisor of the tests and his firm evaluated the studies; and A. J. Loubet and W. B. Glynn, architects of the firm of Loubet & Glynn, Architects, who are the successors to W. D. Peugh, Architect, recently deceased.

Irwin Clavin, architect of New York and consultant to the Equitable Company, declared "the completed tests and other engineering studies" had met with his "most optimistic" expectations.

CALIFORNIA COUNCIL OF ARCHITECTS

Newly elected officers of the C.C.A. for 1954 are: George Lind, Newport Beach, Secretary (left); Malcolm Reynolds, Oakland, President; Henry L. Wright, Los Angeles, Vice-President; and John Bomberger, Modesto, Treasurer.

STRUCTURAL ENGINEERS ASSOCIATION
Southern California

NEW OFFICERS—Ben Benioff, Summerbell Roof Structures and 1953 president of the SEASC, turns the gavel over to newly elected president William T. Wright, Kistner, Wright and Wright. Watching proceedings are Henry M. Layne, Consulting Structural Engineer, vice-president; and (right) C. M. Corbit, Jr., American Institute of Steel Construction, secretary-treasurer.

WILL INSURANCE COVER YOUR LOSS?

Every set of specifications drawn up for a construction project contains references to insurance. The terms "Certificates of Insurance," "Performance Bond," "Hold Harmless" and similar phrases familiar to the insurance industry are found more and more frequently in today's contracts. Although neither the architect nor engineer is expected to be any more familiar with the fine print of an insurance policy than the insurance broker is expected to know the tensile strength of metals, nevertheless they are faced with protecting the owner's interest by requiring adequate insurance of the contractor. The contractor, in turn, of necessity must protect his solvency through a proper program of insurance.

HENRY J. TRAINOR
Consultant, Miller & Ames, Insurance Brokers

The mere purchase of a policy called for in the specifications does not necessarily mean adequate protection for either the owner or the contractor. In this series of articles we hope to familiarize the reader with some of the more important forms of insurance needed by the construction industry and, at the same time, point out some of the points to check on when purchasing or reviewing policies filed in connection with a specific contract.

The most common form of insurance is the Workmen's Compensation policy. The State law requires it and provides stiff penalties for any employer without it. The policy form is generally well standardized yet there are many occasions where a policy could prove inadequate. For example, if the policy holder is a corporation, are executive officers insured? Most policies exclude them unless they are specifically included either by name or position. An executive officer could be an assistant secretary who is given the title merely for convenience in signing papers. Certainly he is entitled to the benfits of the Workmen's Compensation Act but unless he is specifically named on the policy, he would be denied them in the event of an injury.

A serious injury could bankrupt an employer who failed to provide insurance on his executive officers yet many forms provide no such insurance.

Similarly, if the employer is an individual, his relatives are generally excluded from coverage unless they are specifically named. This exclusion, however, does not apply to relatives of executive officers or members of a partnership.

Is the name of the insured correctly shown on the policy? Frequently a partnership will incorporate without changing their style of doing business. It would take a court decision to determine if the insurance company were responsible for payments to injured employees of a corporation if the policy were still in the name of the partnership.

If the particular contract involved contemplates work on the waterfront or in dry docks, it is necessary to have insurance against suits brought under the United States Longshoremen's and Harborworkers' Act. Not all policies automatically provide this insurance without a specific endorsement yet decisions have held that work on navigable waters frequently brings claims under the jurisdiction of this act.

There is still another potential loss which in most States is uninsurable. This is the claim of serious and willful negligence on the part of the employer causing an injury. In California, for example, benefits can be increased 50 per cent up to a maximum of $3,750 if the employer is guilty of this serious and willful negligence. Generally speaking, willful disregard of the Safety Code in connection with ladders, scaffolding, etc. is sufficient evidence for the injured employee to secure the additional penalty benefits and such penalty must be paid out of the employer's pocket. This is one reason why it is essential to run a safe job.

This, remember, is one of the more standardized policies and, therefore, there are fewer chances of inadequate coverage. Some of the more complicated forms of insurance will be discussed in the next issue.

American Institute of Architects

Clair W. Ditchy, President

Norman J. Schlossman, 1st Vice-President — George Bain Cummings, Secretary
Howard Eichenbaum, 2nd Vice-President — Maurice J. Sullivan, Treasurer
Edmund R. Purves, Executive Secretary

National Headquarters—1741 New York Avenue, N. W., Washington, D. C.

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Nevada State Board of Architects:
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CALIFORNIA COUNCIL OF ARCHITECTS

Malcolm Reynolds, President, announced Chairmen of the CCA's five most important standing committees for 1954 would include: Andrew T. Hass, Northern California Chapter, Governmental Relations; William Koblik, Central Valley Chapter, Education and Research; Everett Parks, Orange County Chapter, Public Relations; Jack R. Lewis, San Diego Chapter, By-Laws, and John W. Bomberger, Central Valley Chapter, Budget.

Others appointed by Reynolds to important Committees are William Koblik and Lawrence Gentry as CCA representatives to the California Education Study Council; Walter Wagner, director of the State Builders Exchange; Harry Bruno, representative on the Construction Industry Legislative Council, affiliate of the Builders Exchange; Vincent Palmer, member of the crafts, materials and specifications; S. Robert Anshen, residential construction, and Herman Charles Light, commercial and industrial construction.

The 1954 Annual Convention has been scheduled for September 30, October 1-2, at Hoberg's Resort in Lake County. F. Bourn Hayne, general chairman; Vincent G. Vaney, program committee; Lloyd Gartner, exhibits; Bernard J. Sabaroff, finance; and Ted Moulton, reservations and registration.

ARCHITECTS INVITED TO TAKE PART IN COMPETITION

Members of the Coast Valleys Chapter of the A.I.A. have been invited by officials of the City of Santa

Orange County Chapter:
Philmer J. Ellerbroek, President; John A. Nordbak, Vice-President; Chas. A. Hunter, Treasurer; Gates W. Burrows, Secretary. Directors: Everett E. Parks, Chas. A. Hunter and Everett L. Child. Chapter office 1606 Bust St., Santa Ana.

Oregon Chapter:
Holman J. Barnes, President; Albert W. Hilgers, Vice-President; Donald W. Edmundson, Secretary; DeWitt C. Robinson, Treasurer, and H. Abbott Lawrence, Trustee. Office of Secretary, 325 Henry Bldg., Portland.

Pasadena Chapter:
Wallace C. Bonsall, President; Henry C. Burge, Vice-President; George A. Schaffer, Secretary; Robert S. Cook, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Victor L. Wulff, President; Richard L. Pinnell, Vice-President; Edward G. Holliday, Secretary; Delmar S. Mitchell, Treasurer. Directors, Donald Campbell, Jack R. Lewis and Louis A. Dean. Sec'y Office, 4562 Boundary St., San Diego.

San Joaquin Chapter:
John P. Miller (Fresno), President; Byron C. Brodrick (Fresno), Vice-President; Allen Y. Lew (Fresno), Secretary; Lloyd J. Fletcher (Visalia), Treasurer. Directors, Wm. G. Hyberg, Robert C. Kaestner, Maurice J. Metz. Sec. Office, Fulton-Fresno Bldg., Fresno.

Santa Barbara Chapter:
Lewis A. Storrs, President; Lutah Maria Riggs, Vice-President; Robert Ingle Hoyt, Secretary; Ray W. Cheesman, Treas. Corresponding Secretary: F. Raymond Ford, 238 La Marina, Santa Barbara.

Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhause Bldg., Salt Lake City.

Washington State Chapter:
John S. Detlie, President; Ralf E. Decker, 1st Vice-President; Edwin T. Turner, 2nd Vice-President; Wendell H. Lovett, Secretary; Arnold G. Gangnes, Treas. Directors Paul Thiry, William J. Bain, J. Emil Anderson and Robert B. Price. Dayis Holcomb, Ex-Sec., 409 Central Bldg., Seattle 4.

Spokane Chapter:
Tom Adkinson, President; Carroll Martel, Vice-President; Harry Weller, 2nd Vice-President; William James, Secretary; Lawrence Evanoff, Treasurer. Office of the Secretary, W. 524 - 4th Ave., Spokane.

Tacoma Society:
E. N. Dugan, President; P. G. Ball, Vice-President; Lyle Swedberg, Secretary-Treasurer.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

CALIFORNIA COUNCIL OF ARCHITECTS
Malcolm Reynolds, President; Henry L. Wright, Vice-President; George Lind, Secretary; John Bomberger, Treasurer. Miss Rhoda Monks, Office Secretary. Offices, 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BOARD ARCHITECTURAL EXAMINERS:
George P. Simonds (Oakland), President; Ulysses Floyd Rible (Los Angeles, Secretary; Earl T. Heitschmidt (Los Angeles); C. J. Paderewski (San Diego); Norman K. Blanchard (San Francisco). Exec. Secy., Robert K. Kelley, Room 712, 145 S. Spring St., Los Angeles; San Francisco Office, Room 300, 507 Polk Street.

ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

Clara to assist in staging a competition for the design of a new library building which the City will soon construct at an estimated cost of $96,750.

ARCHITECT HEITSCMIDT REAPPOINTED TO STATE BOARD

Earl Heitschmidt, A.I.A., of Los Angeles, has been reappointed to the California State Board of Architectural Examiners, according to a recent announcement by Governor Goodwin Knight.

Heitschmidt, who served as president of the Board during his past term, will serve under his new appointment until January 15, 1958.

OREGON CHAPTER

Members were reminded at the meeting April 20th to be sure and see the Producers Council Caravan of Building Products at the Columbia Athletic Club on Friday, April 23. This is a $130,000 traveling caravan of 50 to 60 building products provided by 44 members of the Producers Council.

Entries for the Oregon Chapter competition, Robert Fritsch professional advisor, close April 30th.

New members include: James L. Payne, John G. Groom, Wallace P. Hagestad, and Richard Z. Hawes, Jr., Associate Members.

SOUTHWEST WASHINGTON CHAPTER

Architects in Tacoma, Olympia and adjacent territory have just been granted a charter to form a chapter to be called The Southwest Washington Chapter, The American Institute of Architects, at a meeting of the National Executive Board in Washington, D. C.

The Charter Dinner will be held in Tacoma, on Saturday evening, April 24, at which time presidents of various AIA Chapters in Montana, Idaho, Oregon and Washington will attend, representing the Regional Executive Committee.

(See page 32)

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Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

William H. Peterson, President; Walter S. Wassum, Vice-President; O. T. Illerich, Sec.-Treas.; Ernest D. Francis, M. A. Ewing, and Arthur A. Sauer, directors. Office O. T. Illerich, c/o Div. of Arch., Sacramento.

American Society of Civil Engineers
Los Angeles Section

Sterling S. Green, President; Ralph W. Spencer, Vice-President; Walter B. Hollingsworth, Vice-President; C. Martin Duke, Secretary; Gilbert W. Outland, Treasurer. Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

HARRY A. WINNE RECEIVES ENGINEERS AWARD

Harry A. Winne, electrical engineer who recently retired as vice-president of the General Electric Company, has been chosen to receive the National Society of Professional Engineers' 1954 Award, which will be presented at the Society's annual banquet in Milwaukee, Wisconsin, on June 12, in connection with its annual meeting.

In making the announcement, T. Carr Forrest, Jr., Dallas, Texas, engineer and president of the Society, said, "Mr. Winne was selected both because of his extraordinary achievements in the fields of invention, design, development, and production and because of his unstinting devotion to professional principles and ideals."

The Award is bestowed each year to an outstanding engineer in recognition of meritorious service to the engineering profession.

AMERICAN SOCIETY FOR METALS

Puget Sound Chapter

An address and film given by T. R. Lichtenwalter of the Republic Steel Corpn, Alloy Division, Massilon, Ohio, on the subject, "Stainless Steels Are Metallurgy Plus," reviewed the story of the development of the stainless steels and the ensuing growth of the industry.

The advent of stainless steel, first as the chromium-iron type, and later the 18-8 chromium-nickel series, was not only a great step in steel making, but represented one of the greatest developments in the metallurgy of ferrous alloys. In fact, this was a milestone in the transition of the "art of metal-making" to the "science of metallurgy."

One of the first uses for the chromium irons, Lichtenwalter pointed out, was in the manufacture of cutlery. Its uses multiplied as the material was made available and improved in quality. The 18-8 series led to general usage in the chemical, dairy and textile industries, until today stainless steels are used in all industries and new uses are being found daily.

By bringing forth the stainless steels, metallurgists provided mankind with an infinitely useful and versatile material. This material has been so universally demanded by industry that today the only reason for limitation of its use is because of short supply of critical alloying elements.

Thus, the metallurgist has produced for himself another great problem, that of devising a replacement for stainless steel without using large amounts of critical materials.

AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS

L. N. Hunter, president of the American Society of Heating and Ventilating Engineers, was the principal speaker at a recent meeting of the Southern California Chapter of the Society in Los Angeles.

Hunter is nationally known for his research accomplishments.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

Seismological and Other Research Items was the subject of part 1 of a two-part meeting of the SEASC in Los Angeles, April 7. The second part of the meeting was devoted to a consideration of "Cardboard Box, Coffered Slab Design," representing a discussion of the use of cardboard boxes in coffered concrete slabs to produce longer spans which will bear heavier loads. Samples of different size boxes were displayed and a 4'x8' concrete test slab containing eight box areas was on display adjacent to the meeting room.

C. Henning Vagtborg was the moderator during the showing of a motion picture film of the testing of the paper box in a concrete slab simulating actual job conditions.

Lewis K. Osborn, of the firm of Kistner, Wright

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of
Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of
Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices. L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
L. A. O'Leary, Chairman; P. V. Garin, Vice-chairman; H. P. Hoopes, Sec. Office Sec., 1550 Powell St., Emeryville, Calif.

Society of American Military
Engineers—San Francisco Post
CDR N. M. Martinsen, President; L. L. Wise, 1st Vice-President; Col. Paul Berrigan, 2nd Vice-President; R. M. Hamilton, Secretary; Thomas Hurley, Treasurer. Directors, RADM C. A Trexel, J. G. Wright, LTCOL C. S. Lindsey, C. E. Bentley, F. R. Fowler, BRIGEN D. F. Johns, and RADM L. N. Moeller.

---

and Wright, and chairman of the SEASC Research Committee for 1953, gave a report on the work of his committee and R. W. Binder, Chairman of the 1953 Seismology Committee, explained his Committee work, and Theodore Combs, chairman of the 1954 Research Committee, outlined research plans for 1954.

SACRAMENTO VALLEY CHAPTER ASH&VE HEARS HAINES

John E. Haines, first vice-president of the American Society of Heating and Ventilating Engineers with general offices in New York City, was the main speaker at the April 7th meeting of the Sacramento Valley Chapter.

E. C. McKinsey, chief mechanical engineer of the Sacramento District Corps of Engineers, is president of the Chapter.

FEMINEERS

Mr. Moore of Sheridan and Bell, Maiden Lane florists, San Francisco, was the principal speaker at the April meeting held in the Elks Club at noon, on the 21st. Moore described flower decorations, arrangements and corsages.

Announcement was made that the May meeting would be a Dinner Dance to be held in Oakland.

U. C. ENGINEER HONORED BY NATIONAL FRATERNITY

Bernard Alfred Etcheverry, professor emeritus of irrigation and drainage at the Berkeley campus of the University of California, has been awarded National Honor membership in Chi Epsilon, national civil engineering fraternity.

Professor Etcheverry has gained international recognition as "the father of modern irrigation engineering." He has served as consulting engineer for a large number of governmental organizations and private enterprises including the United States Department of Agriculture, the Provincial Government of British Columbia, and several State and County boards in California. In 1932, the Sultan of Morocco conferred special recognition on Professor Etcheverry for his work in that country.

Professor Etcheverry has been listed in Who's Who in America since 1914. He graduated from the University in 1902 as class medalist, the highest honor awarded a graduating student, and he served 46 years on the faculty—longer than any other faculty member—until his retirement in 1951.

Professor Etcheverry, 72, is a member of Phi Beta Kappa, Sigma Xi, Alpha Zeta, and Tau Beta Pi, scholastic honor societies. He also belongs to the University Club of San Francisco and the Faculty Club of the University.

NAMED APPLICATION ENGINEER

George L. Hare, native of San Francisco and graduate of Pomona College, has been named application engineer in the G-E Company's Chemical Materials Department, Anaheim, California plant, according to an announcement by Henry C. Nelson, supervising engineer for the firm.

HEATING & VENTILATING ENGINEERS

Golden Gate Chapter

John E. Haines, first vice-president of The American Society of Heating and Ventilating Engineers, and vice-president of the Commercial Controls Division of the Minneapolis Honeywell Regulator Co at Minneapolis, was the principal speaker at the April meeting of the ASHVE Golden Gate Chapter in San Francisco.

J. E. Murray, president of the Chapter, presided at the meeting.

HARRY H. HILP HEADS DRIVE FOR LICK-WILMERDING SCHOOL

Harry H. Hilp, San Francisco, general engineering contractor, was recently named to head a committee

(See page 34)

PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Roly MacNichol, Libbey-Owens-Ford Glass Co., Rialto Bldg.
Vice-President, Ted Bakeman, F. W. Wakefield Brass Co., 445 Bryant Street
Secretary, John Cowley, Hamilton Manufacturing Co., 2833 3rd Street
Treasurer, Carl Frank, Detroit Steel Products Co., Russ Building
Edited by Stanley L. Basterash—WESTERN ASBESTOS COMPANY

RESULTS OF LITERATURE COMPETITION

The following is the report of the Jury of the Northern California Chapter of the American Institute of Architects on the 1954 Building Products Literature.

The jury was composed of four architect members of the Northern California Chapter, A.I.A., namely: Mr. Arnold Baschen, Mr. Harold C. Dow, Mr. Bernard J. Sabaroff, and Mr. Leonard M. Tivol.

PETE CHRISTENSEN
Chairman, Joint A.I.A.-P.C.

As a format and guide the jury relied on the "Report of the Jury of Awards for the 1953 Building Products Literature Competitions." The jury felt that the following items would increase the usefulness of the literature in architects' offices:

1. Books intended for shelf filing should have hard covers and the name clearly indicated on the backbone.
2. Material for filing should have the A.I.A. file numbers boldly and clearly readable on alternate corners.
3. Local representatives of a product should be clearly noted with their telephone numbers.
4. Where literature contains details, these details should be to scale and should be removable without damaging the literature.
5. A clear index is a great help.
6. More attention should be given the maintenance factors regarding your product.
7. Literature should be dated.
8. Soft binders are expensive and handsome but hard to use.
9. Type should be large enough to be clearly and easily read.

CLASS I—LITERATURE CONCERNED PRIMARILY WITH BASIC TECHNICAL INFORMATION

(This manual or handbook may have been designed and produced by a group or an individual manufacturer.)

FIRST—"Reinforced Brick Masonry & Lateral Force Design"—Clay Brick and Tile Association.

SECOND—"Armstrong's Industrial Insulations"—Armstrong Cork Company.

THIRD—"Specifications, Treated Wood Products"—American Lumber & Treating Company.

CLASS II—LITERATURE OFFERING TECHNICAL INFORMATION CONFINED TO THE TECHNICAL PRODUCTS OF A SINGLE MANUFACTURER

FIRST—"Reference Data"—Owens-Corning Fiberglas Corporation.

SECOND—"Armstrong's Floors & Walls"—Armstrong Cork Company.

THIRD — "Glass for Construction" — Libbey-Owens-Ford Glass Company.

CLASS III—LITERATURE OF PRIMARILY PROMOTIONAL NATURE

(Sheets or short folders supplemental to Classes 1 and 2, intended to keep the manufacturer's name in the architect's attention.)

FIRST—"The Blue Ridge Securit Interior Glass Door"—Libbey-Owens-Ford Glass Company.

SECOND "Sunstyled Satinized Ceramics" — The Cambridge Tile Manufacturing Company.

THIRD—"Bruce Floor Products" — E. L. Bruce Company, Memphis, Tenn.

CLASS IV—SPACE ADVERTISING DIRECTED PRIMARILY TO THE ARCHITECT

FIRST—"Advertisement #B-3251"—Truscon Steel Division, Republic Steel Corp. (Architectural Forum, August 1953).

SECOND—"Advertisement #CP2" — Reynolds Lifetime Aluminum Acoustical System. (Architectural

USE QUALITY PRODUCTS — MANUFACTURERS OF QUALITY BUILDING PRODUCTS — PRODUCERS' COUNCIL — CONSULT AN ARCHITECT

Forum, March 1953; Architectural Record, April 1953.)

THIRD—"Advertisement #PG-403" — Libbey-Owens-Ford Glass Company. (Architectural Record, February 1954; Architectural Forum, February 1954; Progressive Architectural, February 1954.)

The jury felt that the most striking and useful new presentation of literature was made by Owens Corning Fiberglas, "Reference Data," under Class 2. Your attention is called to the year in year out excellent piece of literature, the Detroit Steel Products Company's "Fenestra Blue Book of Drafting Room Standards," entered in Class 1. Attention is also called to American Lumber & Treating Company's "Service Records for Wolmanized Pressure-Treated Lumber," Third Report, as being unique and both valuable and desirable to architects.

It is obvious the judgment has entailed a great deal of work and time by the members of the jury. In magnanimous gesture they felt their time well spent if there is a general improvement in the dissemination of information from the manufacturer to the architect. Mr. Tivol, Chairman of the Construction Committee, also offered the committee's assistance if needed further.

FRED H. STANTON

Fred Harold Stanton, 69, died at his home in Woodside, California, following a long illness. A native of San Francisco, Stanton practiced architecture in San Francisco and the Bay area for many years.

ARCHITECTS CO-SPONSOR LIGHTING EXHIBIT

The Northern California Chapter, A.I.A., was co-sponsor with the Illuminating Engineering Society of a recent conference on lighting at the San Francisco Museum of Art.

An elaborate public exhibition on lighting was held, with the theme of the conference and exhibition being "lighting as an element in architecture" and interior design.

AMERICAN WELDING SOCIETY MEETS IN SAN FRANCISCO

F. C. Harkins, Chief Welding Engineer for Solar Aircraft Co., San Diego, was the principal speaker at a recent meeting of the San Francisco Chapter of the American Welding Society.

Harkins told of the application and control of resistance welding on high temperature aircraft materials and pointed out that while the aviation industry recently celebrated its 50th anniversary it has been less than a decade that welding has begun to replace the rivets and bolts that hold an airplane together.

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PERSONALITIES

F. BOURN HAYNE, A.I.A.
Architect

San Francisco, California

A native born San Franciscan, F. Bourn Hayne received his early education in California, and completed his pre-professional schooling by graduating from Harvard College and the Harvard Architectural School.

F. BOURN HAYNE
Architect

Following some years at newspaper work and teaching, Hayne returned to the City of his boyhood and entered the practice of Architecture.

He has been extremely active in expanding a better understanding between Architects and allied interests and has been prominent in activities of The American Institute of Architects, serving as a member of the National Joint Committee of the A.I.A. and the Producers' Council, formed for the purpose of establishing a better understanding of building material products, manufacturers, and architects.

Hayne has been striving to institute a program to establish a simple but efficient system for the exchange of current building information between architects, so that older practitioners might pass along to younger men the fruits of their experiences in professional practice. This program has been studied and worked on by The American Institute of Architects on a national scale, but as yet is still in formulative stages. Hayne thinks more pressure is needed from the profession to hurry up definite action.

F. Bourn Hayne is presently serving as Manager of the Annual Convention of the California Council of Architects, scheduled for September 30, October 1, 2, at Hoberg's Resort in Lake County, and is building an educational type of program with Vincent Raney, A.I.A., as Chairman for the convention dealing with "Building Material Information."

NEXT MONTH: Harry P. Evans, Metallurgist, Seattle, Washington.

A.I.A. ACTIVITIES

(From page 27)

Officers elected to serve during 1954 include:

Nelson J. Morrison (Tacoma), President; Gilbert M. Wojahn (Tacoma), 1st Vice-President; Robert H. Wohleb (Olympia), 2nd Vice-President; Gordon N. Johnston (Tacoma), Secretary, and Robert A. Parker (Tacoma), Treasurer. Directors selected to serve with the above officers are Silas E. Nelsen, Tacoma; and Lyle N. Sewdberg, Tacoma.

EAST BAY CHAPTER

Frank E. Cox, nationally known as an authority on urban and regional development, was the principal speaker at the April meeting. Cox emphasized the inter-relation of other fields, the modern possibilities and the responsibilties of the architect to the community.

Announcement was made that the May meeting

(See page 34)

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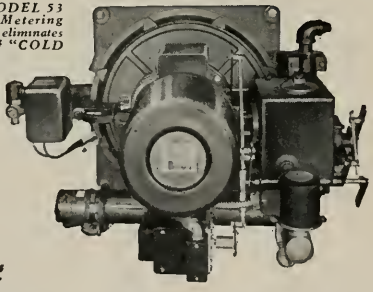

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NATIONAL CONVENTION DATES ARE ANNOUNCED

The National Association of Architectural Metal Manufacturers will hold its 16th Annual Convention at the Netherland Plaza Hotel in Cincinnati, Ohio, from May 12 to 15, according to an announcement by William N. Wilson, Executive Secretary of the organization, with general offices in Chicago.

ELEMENTARY SCHOOL BONDS APPROVED

Electors of the Rena (Nevada) Elementary School District recently approved the issuance of $3,000,000 in School Bonds for the purpose of building 5 new Elementary School buildings in the City of Reno.

GREENVILLE HOSPITAL

The Feather River Hospital District announces it has commissioned the architectural firm of Sellon & Cox of Sacramento to draw up plans and specifications for the construction of a 14-Bed Hospital to be built in the City of Greenville.

OFFICE BUILDING FOR MODESTO

Architects Russell G. De Lappe and Mitchell Van Bourg of Berkeley are preparing preliminary drawings for the construction of a 4-story reinforced concrete office building to be built in the City of Modesto for the Modesto Irrigation District.

YUMA SCHOOL BONDS

Voters of the Antelope Union High School District recently approved a proposal to issue and sell school bonds in the amount of $157,000 to build a gymnasium, athletic field and to landscape school grounds.

CALIFORNIA YOUTH GUIDANCE CENTER

Funds have been approved by the State of California for the construction of a new Reception-Guidance Center and additioos to the Administration Buildings of the California Medical Facility at Vacaville, amounting to $3,695,000.

All buildings are being designed by the State of California Division of Architecture, Anson Boyd, director, and will comprise reinforced concrete construction.

FACTORY BUILDING

Architects Hiram J. Hamer and Maynard D. Houston of Los Angeles are preparing working drawings for the construction of a reinforced concrete brick factory building in Gardena.

The new building will contain 22,000 sq. ft. in area; wood trusses, composition roofing, concrete slab, asphalt tile floors in office area, steel roll-up doors, rotary roof ventilators, steel windows, suspended gas heaters and forced air heating in office area, and 20,000 sq. ft. of asphalt paving.

EXECUTIVE OFFICES CONSOLIDATED

Sales and advertising departments of the Janitrol Heating and Air Conditioning Division of the Surface Combustion Corpn. will be transferred to Columbus from Toledo, according to an announcement by Frank H. Adams, firm president.

Manufacturing and engineering operations for the Janitrol Division have always been located at Columbus, and transfer of over 25 key personnel to the new facilities will permit more efficient operation and better customer service.

AIRPORT BUILDING

Architect Leonard F. Starks of Sacramento is completing plans for the construction of an Airport Administration Building at the Municipal Airport for the City of Sacramento.

The work comprises a 2-story, reinforced concrete building to contain general administrative offices, ticket offices, restaurant and cocktail lounge.

Estimated cost of the project is $350,000.

ARTS BUILDING

Architect William Corlett of San Francisco is completiog drawings for construction of a new Industrial Arts Building on the campus of Marin College, Kentfield, Marin county.

The unit will be of 1-story reinforced concrete construction.

SCHOOL BONDS APPROVED

Voters of the Sparks (Nevada) Elementary School District approved the issuance of $500,000 in School Bonds for the purpose of building new Elementary Schools and additions to the present Elementary Schools in the City of Sparks.

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A.I.A. ACTIVITIES

(From page 32)

would be a joint meeting with the East Bay Structural Engineers Club, with Dudly W. Frost, general manager of the Port of Oakland, the principal speaker.

New Members—William Gillis, Corporate.

WOMEN'S ARCHITECTURAL LEAGUE EAST BAY CHAPTER

Mrs. Winfield Hyde, president, has named Mrs. John Zerkle chairman of the committee to work with the East Bay Chapter, A.I.A., Heart Association Committee, to determine how architects can make facilities in the home simplified to aid those with heart trouble.

Mrs. William C. Ambrose, Mrs. Russell de Lappe, Mrs. James Anderson, and Mrs. Theodore Osmundson are also members of the special heart committee.

ANN ARBOR, MICHIGAN, STAGES ARCHITECTURAL COMPETITION

The Ann Arbor Junior Chamber of Commerce recently announced plans for an Architectural Competition in connection with their annual merchants show. Title of the competition is "Ann Arbor JCC Modern Home for 1954."

Lynn W. Fry, University of Michigan Supervising Architect, is serving as professional advisor, and the event has been approved by the A.I.A.

Prizes totaling more than $500 are being offered. Accent is being placed on air conditioning and the arrangement of other modern conveniences for greater liveability; actual design is for a three bedroom house for the average American family. Total living area may not exceed 12,000 sq. ft., not including a possible garage, carport, or basement.

ORANGE COUNTY CHAPTER

"Orange County Planning" was the subject of the April meeting held in the Balboa Bay Club, with Harry Berg, director of the American Institute of Planning, President of the Board of Governors of the American Institute, past president of the California Chapter of Planning Commission, and for the past seventeen years connected with the Los Angeles Regional Planning Commission, the principal speaker.

The Chapter is publishing an enlarged Bulletin for members.

WITH THE ENGINEERS

(From page 29)

to raise funds for the construction of new facilities at the Lick-Wilmerding School, San Francisco.

Properly known as the California School of Mechanical Arts and the Wilmerding School of Industrial Arts, the school was established in 1875, and is today known as a technical secondary school, emphasizing "head and hand" training by actual experience with practical shop methods.

Plans for the new school, to be built on a site acquired at Ocean avenue and Tara streets in San Francisco, have been prepared by William G. Merchant, architect.

NEWS & COMMENT ON ART

(From page 5)

tries; and Art In Latin America—in honor of Pan-American Week and international relations by art.

EVENTS: Composers' Forum—three concerts on Wednesday evenings, April 7, May 5, and June 9th at 8:15. Lecture Tours of the Museum, each Sunday afternoon at 3 o'clock; Adventures in Drawing and Painting—Friday evenings the Sketch Club and Painting Classes. Art for the Layman—a course designed to awaken and develop inherent artistic potentialities of the layman; and the Children's Classes in Art each Saturday morning.

The Museum is open daily.

SAN FRANCISCO ART ASSOCIATION

The 73rd Art Association's Painting and Sculpture Annual, recently shown at the San Francisco Museum of Art, represented 200 works chosen from more than 800 entries of more than eleven hundred submissions.

From the 165 works exhibited, twelve paintings and seven sculptures were voted prizes totaling $2,120.

Richards Ruben was awarded the Anne Bremer Memorial Prize for Painting; Henri A. Marie-Rose received the Emanuel Walter Purchase Prize, and John Saccaro won the San Francisco Art Association Prize for Painting.

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1954 CONVENTION PLANS ANNOUNCED BY THE CALIFORNIA COUNCIL OF ARCHITECTS

(From page 7)

tact has been established with the president of the Napa Valley Vintners, and guided tours through several of the lovely Napa Valley wineries have been assured. By the end of September the vintage season will be at its height with truck loads of grapes being crushed at all of these world famous wineries. Napa Valley wine will flow at Hoberg's in no mean manner both before and after the tours.

Hoberg's is a well known resort which has entertained guests for three generations. In recent years more and more cottages have been built as demands have increased and in later years many conventions of all sorts have been staged at this lovely mountain retreat among the pines of Lake County. Swimming in a large, heated pool, soft ball, tennis, croquet, golf putting, riding, and dancing make up the sports which can be enjoyed as well as just relaxing and breathing the mountain air. The surrounding country is beautiful and wild and visitors from the south can be assured that the scenery is unusual.

In speaking of the convention's theme, "Building Material Information," Architect Hayne says that for several years he has been endeavoring to stimulate interest in the establishment of a simple but efficient system for the exchange of building information between architects so that older practitioners may be able to pass on to younger men the fruits of their experiences as well as a method whereby an accurate, up-to-date file can be kept on materials, new and old. He has served for two years on the National A.I.A.-Producers' Council Joint Committee and has presented a workable system in which The Institute would take an active interest in facts and specifications and would set up an editing department which would be at the service of manufacturers of building materials.

"For the last year or so," Hayne says, "I have been doing what I term objective reading when I pick up any contemporary article about architects and architecture. This objective reading has been most rewarding. To my great gratification I find that more and more nationally recognized architects and engineers are harping on this need for a system for the exchange of ideas and facts, more and more criticism is being made of the greatly neglected field of specifications, and more and more architects are beginning to realize that it is impossible to keep abreast of the rapidly expanding, vast building industry.

"The architects must organize as a fact-finding and fact-recording group like the medical profession, the legal profession and the engineers. I feel sure that the manufacturers will quickly fall in line with these requirements of the building industry as soon as the architects, who are the logical coordinators, take the initiative.

"The only 'leader' of the building industry is the President of the United States because the building industry is so extensive that it embraces millions of people. The role of the architect is one of design and coordination and there are none to really challenge this role. By coordinator I not only mean coordination with the real estate man, the engineers, the contractor, the landscape architect and the owner, but even more important, the coordinator between the 41 divisions of the sub-trades as well as with the labor unions. It is the natural function of the architect to work with each of the sub-trades for a simple and logical system for the presentation of workable and up-to-date facts so that specifications for buildings will not over-lap and conflict. Such coordination must be extended to labor unions so that undesirable jurisdictional strikes will not occur.

"Up to the present time our Construction Committee of the Northern California Chapter, A.I.A., has enjoyed most satisfactory steps of accomplishment with the Painting and Decorating Contractors of California, The Woodwork Institute of California, the

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WRITE FOR FREE ILLUSTRATED LITERATURE

Heating Piping & Air Conditioning Contractors Association of Northern California and with the California Pipe Trades Council, so it is my belief that with a little more patience, understanding and mutual confidence, the role of the architect will gradually become clearer as the master designer and coordinator of the building industry during the coming years of the last half of the twentieth century."

ARCHITECT NAMED COST CONSULTANT FOR STATE

Herbert J. Mann of Pasadena has been named as a special consultant on the reduction of school construction costs by LeRoy E. Lyon, Jr., chairman of the California Legislative Assembly Interim Committee on Education's Subcommittee on Public School Construction.

Mann is head of the firm of Herbert J. Mann & Associates, who act as special cost consultants in the building of churches, schools and other public buildings. He will work with the Assembly committee in searching out cost saving procedures in school construction.

ARCHITECT SPEAKER ON SAN FRANCISCO PLANNING AND HOUSING CONFERENCE

William Wurster, dean of the School of Architecture, University of California, was one of the principal speakers on a symposium sponsored by the San Francisco Planning Association.

His subject was "The Presidio—A Green Belt."

GRAVITY

(From page 6)

the tremendous immensity of distance in space.

The widely discussed theory of relativity pictures the universe whose dimensions are a certain amount of space and a certain amount of time, with the cosmos divided into matter and space.

We know nothing about the matter, nor do we know how many firmaments exist beyond the endless space.

If, in any direction from any point on our earth, we see only the under surface of stars and their gradually diminishing sizes finally ending a misty haze of worlds billions of light years away.

Inhabitants on other planets in the measureless space beyond may do likewise for all we know.

Commenting on Relativity, Sir James Jeans, Astronomer-Author, has this to say: "The Universe is a thought in the mind of The Creator, thereby reducing all discussions to futility."

Almost all astronomers believe in their own theories; however, not all of them agree with each other on all subjects; which leads me to realize that the finite human has reached the limit of celestial exploration.

Regarding Time, Space and Distance, I would say that: Time, like The Creator, is eternal, without a beginning and having no end; Space envelops the Universe to infinity on all sides; and Remote Distance is measureless as space is apparently boundless.

VERMONT MARBLE COMPANY MOVES INTO NEW OFFICES

The Vermont Marble Company of San Francisco, recently announced the opening of new general offices at 6000 3rd Street, San Francisco, where complete facilities have been added for display of the firm's Marble and Granite Veneer products.

The new offices are adjacent to the company's plant.

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68 Post Street San Francisco

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

ARCHITECTS DETAIL SHEETS. By Edward D. Mills, F.R.I.B.A. Iliffe & Sons, Ltd., London, England. Price $5.50

The question of detail design in modern buildings is one of considerable importance. Good architectural detailing is both a practical and an aesthetic problem, and the object of the detail sheets published in this book is to show in actual examples how contemporary designers have combined, in recent modern buildings, good construction and satisfactory appearance.

Examples have been selected from those which have appeared regularly in "The Architect and Building News" during the past few years. They consist of specially prepared scale drawings, accompanied by photographs.

Architects' details are drawn from many countries; arranged in appropriate groupings and cover a wide range of problems. Both architectural students and practicing architects will find much of value in the book.

SURVIVAL THROUGH DESIGN. By Richard Neutra. Oxford University Press, 114 Fifth Ave., New York 11. Price $5.50.

This is a revolutionary book on design and its vital significance for the very survival of the human race, written by one of the greatest architects of today.

The book is bound to stimulate creative controversy and to make a lasting contribution to design criticism. It is a book to be read by anyone interested in society and civilization in a hectic, industrialized age.

The author bases his argument on the historically growing necessity to plan with a more biological bias. He lists and proposes in simple form suitable lines of research, the results of which would eventually make available the necessary physiological data upon which responsible design should be based and developed. There is need for a warmer, more humanly pulsing effort to design for life and thus to preserve it.

HOME PLANNERS' HOMES—Of Natural Stone. By Richard B. Pollman. Home Planners, Inc., 16310 Grand River, Detroit 27, Michigan. Price S.50.

The booklet is divided into two thoughts, "Home Design Today" and "Selecting the Right Home," and includes outdoor barbecues, fireplaces, attractive floors, fences, garden walks, patio floors, interior and exterior planters, as well as home design plans by the well known architectural firm of Palmquist & Wright, A.I.A., architects.

The publication has been issued in cooperation with the Stone Council, a department of the International Cut Stone Contractors' and Quarrymen's Association. Many illustrations, some in color.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Suggestions for the installation and care of northern hardwood flooring. A new pamphlet containing many suggestions to the contractor, builder, floor layer, and specifications writer on the subject of northern hardwood flooring including Maple, Beech and Birch. Contains a list of "do's" and "don'ts"; prepared by the Maple Flooring Manufacturers Ass'n., 35 East Wacker Dr., Chicago, Ill. For free copy write DEPT-A&E, LeRoy Olson Co., 3070 - 17th St., San Francisco.

Pressure treated wood. A new 32-page brochure (A.I.A. File No. 19a3), which tells a comprehensive story in text, photographs, charts and drawings of pressure treated wood: its value and uses in many fields of industry, has just been published by the J. H. Baxter & Co, entitled "BAXCO Chemonited Forest Products." Booklet describes natural enemies of wood—fungi and termites—and how wood can be protected by Chemonite. Also lists specifications information, and list of Chemonited lumber users in commercial industry. For free copy, write DEPT-A&E, J. H. Baxter & Co, 200 Bush Street, San Francisco 4.

Air conditioners. A 6-page technical bulletin describing its 1954 line of packaged air conditioners; designed for store, of-

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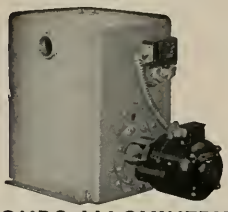

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CATALOGS — Continued

fice, residential, restaurant and other uses has just been issued by the United States Air Conditioning Corpn. The bulletin is liberally illustrated; provides construction details, complete specifications and performance ratings of the various units which are available in 2, 3, 5, 7½, 10 and 15 hp. sizes. Free copy available by writing DEPT-A&E, United States Air Conditioning Corp, 3300 Como Ave, S.E., Minneapolis 14, Minn.

Engineered steel doors. New brochure, in color and complete with descriptive material, photographs of installations, drawings and multi-use suggestions; also data on types of users, now available by writing DEPT-A&E, Rolph, Mills & Co, 171 2nd St, San Francisco, Calif.

Thermostatic control of temperature in each room. A new brochure (A.I.A. File No. 30C) has just been published showing photographs, drawings, specifications on SelecTemp individual thermostatic control systems. Designed for use in residences, hotels and motels, apartment houses, hospitals, institutions and office buildings. Free copy write DEPT-A&E, Iron Fireman Mfg. Co, Cleveland 11, Ohio.

Wide span industrial door. Contains comprehensive information on custom-made, wide span doors for commercial and industrial buildings; photographs and detail drawings, data on material and construction, basic types, accessories, specification details, assembly instructions, engineering and installation, maintenance economies and operation. Of particular interest to architects, engineers and builders. Catalog is available by writing DEPT-A&E, Stevens-Thuet Co, 2165 Cowles St, Long Beach 13, Calif.

Perimeter diffusers. New brochure on complete air control by use of perimeter diffusers; contains photographs of industrial, educational and residential installations; gives data on how to hold floor to ceiling temperature differential at absolute minimum, engineering data and specifications chart, construction information and installation instructions. For free copy write DEPT-A&E, Titus Inc, Waterloo, Iowa.

Restroom and shower facilities. Practical aid in the selection of modern restroom and shower facilities is contained in the new catalog (A.I.A. 35-H-6) just published; contains descriptions and illustrations in color of toilet compartments, shower stalls, and dressing rooms, supplemented with detailed engineering data and architectural specifications; special section (illustrated) on hospital cubicles. A handy selection chart enables one to quickly determine the type of units that will best serve his needs; accompanied by color chips of 22-colors available. Available in ceiling-hung and floor supported type; installation described and designed according to modular system of dimensional coordination. For copy write DEPT-A&E, The Sanymetal Products Co, Inc, 1705 Urbana Road, Celeveland 12, Ohio.

Water systems and pumps. A new 96-page "Commercial Catalog C-54) gives comprehensive data, construction details, and selection tables on twelve types of Deming water systems including the latest dual-purpose jet pumps, convertible for shallow or deep well service; and the submersible type of deep well pump. Miscellaneous units featured include the new "Motor-Mount" centrifugal pump designed primarily for air conditioning service but applicable for booster service, general circulating service, swimming pools, lawn sprinkling, and industrial plant service; also side suction centrifugal pumps of small capacities, standard "Motor-Mount" centrifugal pumps in both vertical and horizontal types, condensation return units, cellar drainers and sump pumps, portable self-priming pumps for drainage or water handling jobs, and other types of pumps and accessories. For free copy write DEPT-A&E, The DeMing Co, Salem, Ohio.

Steam generators. New bulletin BE-3, describes exclusive design—a two-pass system with forced draft-automatic boiler. Operates by air entering through turbine like vanes which create a spinning or highly turbulent flame in the furnace. Gases are spun again in all return tubes by means of a fixed steel impeller. The spinning gas technique provides greater heat transfer per pass. All units have guaranteed minimum efficiency of 80%. Steam is 99% dry. Continental boilers feature hinged doors on front and back; simplified, highly accessible construction, and easy maintenance. Copy available by writing DEPT-A&E, Continental Boiler Division, Boiler Engineering & Supply Co, Inc, Phoenixville, Pa.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—	
8x5½x12-inches, per M	$139 50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00
Hollow Tile—	
12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	2.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$12.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88

Cement—
Common (all brands, paper sacks),
Per Sack, small quantity (paper) $1.05
Carload lots, in bulk, per bbl.) 3.55
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount 2% on L.C.L.

Trinity White, Medusa White, Calaveras White — 1 to 100 sacks, $3.50 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 4-yd. loads:

Per cubic yard, 1-8 Mix	$ 9.80
1-7 Mix	10.15
1-6 Mix	10.70
1-5 Mix	11.40
Curing Compound. clear, drums, per gal.	1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .19	$ .19
6x8x16-inches, each	.23	.235
8x8x16-inches, each	.27	.27
12x8x16-inches, each	.38	.40
12x8x24-inches, each		.60

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	⅝x2
	$	$	$	$
Clear Otd., White	$425	$405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/64 x 2¼	390.00	381.00
33/64 x 2¾	375.00	355.00
33/64 x 3¼	395.00	375.00
33/64 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/64 x 2¼ First Grade	$390.00
33/64 x 2¼ 2nd Grade	365.00
33/64 x 2¼ 2nd & Btr. Grade	375.00
33/64 x 2¼ 3rd Grade	240.00
33/64 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/64 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Siselation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-S1S $135.00
½-inch, 4.0x8.0-S1S 219.00
¾-inch, per M sq. ft. 292.00
Plyscord ..... 11½c per ft.
Plyform ..... 25c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $43.50
Standard Ribbed, ditto $47.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (8asis 7¾ lbs. per gal.)		Raw	Wholesale Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (8asis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $13.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.25
Vented hip skylights, per sq. ft. 2.25
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft.. 1.85

STEEL—STRUCTURAL—

$290 per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.20 to $1.60 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.35 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $1.65 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—	
8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—	
12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Tectar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 522 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2 3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(96)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(116)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 333 Montgomery St., DO 2-3883
Los Angeles 13: 601 West Fifth St., MI 6294

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT & HILP
San Francisco: 918 Harrison St., DO 2-0700
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

MEDICAL BLDG. Tucson, Arizona. Tucson Clinic, Tucson, owner. 1-Story and basement, reinforced concrete and masonry construction, composition roofing, insulation, stone work, plate glass, cement and asphalt tile floors, acoustical work, air conditioning, metal sash, 26,000 sq. ft. floor space. ARCHITECT: Scholer, Sakellar & Fuller, Tucson. GENERAL CONTRACTOR: Pacheco & Lynch Const. Co., Tucson, Arizona.

ELEMENTARY SCHOOL, Shasta Meadows, Shasta county. Enterprise Elementary School district, Enterprise, owner. Frame and stucco construction, 6-classrooms, kindergarten, administration and toilets—$157,936. ARCHITECT: J. Clarence Felciano, Santa Rosa. GENERAL CONTRACTOR: Stolte, Inc., Oakland.

HIGH SCHOOL ADDN., Galt, Sacramento county. Galt Joint Union High School District, Galt, owner. 4 classrooms, music building, and shop; frame and stucco construction, some brick veneer, structural steel, $198,333. ARCHITECT: Henry V. Chescoe, San Francisco. STRUCTURAL ENGINEER: Geo. K. Krokaw, San Francisco. GENERAL CONTRACTOR: Darrigo & Powers, Stockton.

BOWLING ALLEY & RESTAURANT, Van Nuys, Los Angeles county. Panorama Bowl, Inc., Long Beach, owner. 1-story 25-room reinforced concrete block bowling alley, restaurant and bar; 179x180 ft., composition and gravel roofing, concrete, terrazzo and asphalt tile floors, interior plaster, insulation, gas water heater, cast iron downspouts, sign tower, plate glass entrances, rock planter boxes, tapered steel girders, toilets and stall showers, acoustic tile and cement plaster ceilings, dishwasher, carpets in bar and lounge, built-in seats and booths, automatic pin setter machine, neon and fluorescent lighting, air conditioning, $100,000. ENGINEER: R. C. Van Orden, San Gabriel. GENERAL CONTRACTOR: Lacey F. Johnson, Inc., Los Angeles.

CHURCH, Sunday School, Social Hall and Kitchens, Bakersfield, Kern county. First Congregational Church, Bakersfield, owner. Masonry construction, laminated arch roof trusses and wood roof, concrete floors, radiant heating, air conditioning, $236,230. ARCHITECT: Whitney, Biggar, Bakersfield. GENERAL CONTRACTOR: Wm. A. Drennan, Oildale.

HOUSING PROJECT & SHOPPING CENTER, San Diego. Aldon Construction Co., Bellflower, and the Del E. Webb Construction Co., San Fernando, owners. Plan calls for construction of 2500 dwell-

ings and a shopping center in the Clairemont district in the City of San Diego, $30,000,000 (housing) and $5,000,000 (shopping center). GENERAL CONTRACTORS: Aldon Construction Co. and Del E. Webb Construction Co.

FACTORY & OFFICE, San Leandro, Alameda county. Schering Corp., San Leandro, owner. 1-story reinforced concrete, tilt-up construction, wood roof, 12,000 sq. ft. floor space, $60,000. STRUCTURAL ENGINEER: John M. Sardis, San Francisco. GENERAL CONTRACTOR: James E. Fuller, Oakland.

LA MESA ELEMENTARY SCHOOL, Monterey. Monterey Unified School District, Monterey, owner. A. U. S. Navy Wherry Housing Project site; 10 classrooms, 2 kindergartens, kitchen, multipurpose rooms, toilets; frame and stucco construction, concrete floors, radiant heating, asphalt tile floors, $320,600. ARCHITECT: Butner, Holm & Waterman, Salinas. GENERAL CONTRACTOR: F. V. Hampshire, Salinas.

SUNDAY SCHOOL ADDN., Santa Cruz. Calvary Episcopal Church, Santa Cruz, owner. 1-story frame, wood exterior, wood shingle roof; 2,800 sq. ft. of floor area, $36,415. ARCHITECT: Lynn R. Duckering, Santa Cruz. GENERAL CONTRACTOR: Perry A. Ross, Santa Cruz.

OFFICE & WAREHOUSE, Stockton, San Joaquin county. Zellerbach Paper Co., San Francisco, owner. Office 40x60 ft., frame and stucco, aluminum sash; warehouse 180x220 ft. reinforced concrete, tilt-up construction, some structural steel, structural steel roof trusses, steel rolling doors, wood roof, $160,000. ENGINEER: J. Y. Long Co., Oakland. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

WOMENS HOUSING, County Honor Farm, French Camp, San Joaquin county. County of San Joaquin, Stockton, owner. Administration room, dining room, kitchen, vocational wing, and dormitory; 1-story reinforced concrete construction, light weight concrete roof, steel sash, 265,490. ARCHITECT: Ernst & Lloyd (J. E. Lloyd, Architect), Stockton. GENERAL CONTRACTOR: Walter A. Hachman, Stockton.

SHOPPING CENTER, Santa Rosa, Sonoma county. Earl Cohen & Associates, c/o Architect, owner. 1-story and part mezzanine, concrete and frame construction, wood roof trusses, concrete slab floor; to

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clare	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.95	3.00	3.00	3.00	3.00	3.00
REINF. STREET	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85*				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

* 6 Hour Day. ** 7 Hour Day. *** Before C.I.S.C for 15c increase.

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accommodate 6 stores, 68,000 sq. ft. floor space. ARCHITECT: Nelson P. Rice, Los Angeles. GENERAL CONTRACTOR: Dinwiddie Construction Co., San Francisco.

ELEMENTARY SCHOOL, Phoenix, Arizona. Maricopa County Board of Supervisors, Phoenix, owner. Creighton School District No. 14, 15 rooms including 6 class rooms, administrative unit, cafeteria, domestic science unit, shop building, boiler room; pumice construction, built-up roofing, slab and asphalt tile floors, structural steel, evaporative coolers, insulation, plaster, steel sash, tile, electrical work, plumbing, sheet metal work, $75,981. ARCHITECT: Melverne C. Ensign, Phoenix. GENERAL CONTRACTOR: Gilbert & Dolan, Phoenix.

SEWAGE TREATMENT PLANT, Cotati Public Utility District, Cotati, owner. Contract awarded at $63,490. ENGINEER: Robert Van Guelten, Santa Rosa. GENERAL CONTRACTOR: Peletz Co., Santa Rosa.

CHURCH, San Francisco. St. Andrews Evangelical Lutheran Church, San Francisco, owner. 2-story frame construction, $55,000. ARCHITECT: J. A. Murray, Hollywood. GENERAL CONTRACTOR: Central California Construction Co., San Francisco.

CITY HALL & POLICE STATION, Whittier. City of Whittier, owner. 3-story reinforced concrete City Hall building containing 25,000 sq. ft. of area and 14,000 sq. ft. jail; lightweight concrete roof, concrete floor, aluminum sash, painting, plastering, plumbing, electrical work, acoustical work, heating and ventilating, reinforced glass block in security section, structural steel, sheet metal, $726,700. ARCHITECT: William H. Harrison, Los Angeles. GENERAL CONTRACTOR: Kemp Bros., Los Angeles.

STORE BLDG., Redwood City, San Mateo county. McDonald, Wilson & Draper, c/o architect, owner. 1-story reinforced concrete building for 4 stores; wood and structural steel roof trusses, terrazzo and plate glass front, $95,973. ARCHITECT: Miller & Steiner, San Mateo. GENERAL CONTRACTOR: Chas. Pedersen, San Mateo.

OLYMPIC ELEMENTARY SCHOOL, Daly City, San Mateo county. Jefferson Elementary School District, Daly City, owner. Frame and stucco construction; administration unit, multi-purpose rooms, 6 classrooms, $218,000. ARCHITECT: Mario Ciampi, San Francisco. GENERAL CONTRACTOR: Vance M. Brown & Son, Palo Alto.

COLLEGE STADIUM, Bakersfield, Kern county. Kern County Union High School and Junior College, Bakersfield, owner. Site development of areas A and B; athletic stadium seating 16,000 persons; 60,000 sq. ft. poured concrete, reinforced concrete roof, steel trusses, $1,161,000. ARCHITECT: Wright, Metcalf & Parsons, Bakersfield. GENERAL CONTRACTOR: Tumblin Co., Bakersfield.

SACRED HEART PAROCHIAL SCHOOL, Turlock, Stanislaus county. Roman Catholic Archbishop of San Francisco, owner. 1-story frame and stucco reinforced concrete construction: administration unit, 8 classrooms, cafeteria, kitchen and toilet rooms, $159,715. ARCHITECT: Smith & Minton, San Francisco. GENERAL CONTRACTOR: Arden Hutchings, Merced.

FIRE HOUSE, Carson City, Nevada. City of Carson City, owner. 1-story concrete block, some structural steel, wood roof, $67,977. ARCHITECT: Lockard & Casazza, Reno. GENERAL CONTRACTOR: Carl B. Ernest, Reno.

GYMNASIUM & SWIMMING POOL, California Institute of Technology, Pasadena, Los Angeles county. California Institute of Technology, Pasadena, owner. 1-story reinforced concrete gymnasium, shower and locker room, and swimming pool; lamellatype roof, composition roofing, concrete and wood floor, asphalt tile flooring, metal sash, acoustical work, painting, plastering, plumbing, electrical work, heating and ventilating, $446,613. ARCHITECTS: Pereira & Luckman, Los Angeles, supervising. ARCHITECTS: March, Smith & Powell, Los Angeles, prepared plans and specifications. GENERAL CONTRACTOR: Escherich Bros., Inc., Los Angeles.

PORTABLE CLASSROOMS, Sacramento. Sacramento Unified School District, Sacramento, owner. Frame and stucco construction; 45 portable classroom buildings for use by various schools throughout the city, $254,783. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Opdyke & Butler & Tucker Const. Co., Sacramento.

ELEMENTARY SCHOOL, Tracy, San Joaquin county. Tracy Elementary School District, Tracy, owner. Frame and stucco construction; 8 classrooms, administration unit, kindergarten, multi-purpose room, kitchen, toilet rooms—$224,692. ARCHITECHT: Ernst & Loyd, Stockton. GENERAL CONTRACTOR: Nomellini Const Co, Stockton.

SCHOOL AUDITORIUM, Visitation Parish, Los Angeles. Roman Catholic Archbishop of Los Angeles, Los Angeles, owner. 2-story, reinforced brick school and auditorium: 54x154 ft., shingle tile roofing, concrete and oak block and asphalt tile floors, interior plaster, suspended acoustic plaster and acoustic tile ceilings, asphalt paving, copper gutters and cast iron drains, exposed concrete beams, marble toilet partitions, gas fired furnaces and

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ventilation system, loud speakers, steel sash, cast stone grill, aluminum roller curtain. $125,000. ARCHITECT: Barker & Ott, Los Angeles. GENERAL CONTRACTOR: Ben K. Tanner & Son, Beverly Hills.

MEDICAL BLDG., Tulare. Dr. Cyril Johnson, Tulare, owner. 1-story, two-suite frame and stucco construction, some stone veneer, asphalt tile floors, $60,000. ARCHITECT: George M. Chambers, Palo Alto. GENERAL CONTRACTOR Howard J. White, Inc., Palo Alto.

APARTMENT COURT, Oakland, Alameda county. Owner c/o architect. 2-story frame and stucco, some brick veneer, tile baths: 34 apartments, $174,000. ARCHITECT: John B. Anthony, Oakland. GENERAL CONTRACTOR: A. S. Holmes & Son, Oakland.

IN THE NEWS

ELECTED NAHB REGIONAL PREXY

Andres F. Oddstad, president of Homes By Sterling, Redwood City, has been elected regional vice-president for northern California of the National Association of Home Builders.

General offices of the NAHB are in Washington, D. C.

JANITROL SUMMER AIR CONDITIONER

A new summer air conditioner, completing the line of home comfort equipment manufactured by its Janitrol Division, has been announced by the Surface Combustion Corpn. known as the "Win-Sum Twins."

It has been field tested in over 200 installations for over a year. Several outstanding features are emphasized: quiet compressor and thermal insulation.

Available in three models, 5-ton capacity (combination of 2 and 3 ton capacity models); 2 ton and 3 ton models. All are housed in blue-gray finish steel casing; finger tip control damper. Complete data available from Surface Combustion Corpn, Columbus, Ohio.

GYMNASIUM BUILDING

The architectural firm of Neptune & Thomas of Pasadena are preparing plans for the construction of a pre-cast concrete gymnasium building at the Fontana High School for the Chaffey Unified School District.

The building will contain 20,000 sq. ft. of poured gypsum roofing with a gravel surfacing; prestressed concrete girders, hardwood floors, and a shower and locker area.

HIGH SCHOOL BONDS VOTED

Electors of the Los Gatos Union High School District recently approved the issuance of $500,000 in school bonds for the purpose of building an addition to the High School at Los Gatos.

GENERAL MOTORS TRAINING CENTER

General Motors Corpn of Detroit, Michigan, recently announced plans for the construction of a General Motors Training Center in San Leandro, Alameda county.

The center will comprise a 1-story building of 28,000 sq. ft. of floor space, reinforced concrete construction. Specialized shop classrooms, auditorium, conference rooms, cafeteria and kitchen will be included in the building.

RESIDENTIAL DEVELOPMENT

Plans are under way for the development and construction of 143 new dwellings in Las Vegas, Nevada, for the firm of Burke and Wyatt.

The development to be known as the Western Park addition will be homes of frame and stucco construction; 6 rooms, white rock roof, concrete with asphalt tile floors, plaster, steel sash, and will cost an estimated $11,000.

William F. Von Der of Los Vegas is designing the homes.

WAREHOUSE AND SERVICE BUILDING

Architects Chaix & Johnson of Los Angeles are preparing plans for the construction of a 2-story, tilt-up and poured concrete warehouse and service building in Los Angeles.

The building will be 730x380 ft.; double gravel composition roofing, steel columns, concrete floors, metal sash, acoustical work, heating, ventilating, plastering, plumbing, electrical work, conveyor belts, drag lines, yard surfacing and other improvements.

Brandow & Johnston, structural engineers of Los Angeles; and Lester Kelly,

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mechanical engineer of Los Angeles, are also working on the project.

ARCHITECT SELECTED

Architect Harry J. Devine of Sacramento has been commissioned by the Roman Catholic Diocese of Sacramento to draw plans and specifications for the construction of a combination New Church, Grammar School and Boys High School for the St. Ignatius Parish of Sacramento.

NEW CLUBHOUSE BUILDING

The Stockton Golf & Country Club announced construction would soon start on a new clubhouse building.

The planned building will be of 1-story frame with some concrete block and stone veneer; carpets, asphalt tile and cork tile floors; shower and locker rooms, steel lockers; club rooms, dining room and kitchen, and cocktail lounge.

Clarence W. W. Mayhew of San Francisco is the architect. Estimated cost of construction is $300,000.

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ARCHITECT SELECTED

Architect John Lyon Reid of San Francisco has been commissioned by the Alhambra Union High School District in Contra Costa county to draw plans for the construction of an addition to the High School in Martinez.

ALTERATIONS TO CITY HALL

Architect Herman O. Ruhnau of Riverside has been commissioned by the Riverside City Council to conduct a study and draw plans and specifications for the construction of an addition to the city hall.

Various department of the city's government will be relocated and added space provided for the accounting and purchasing departments.

PALO ALTO TO GET SHOPPING CENTER

The Board of Trustees of Stanford University recently announced plans for the construction of a new Shopping Center on property owned by the University in Palo Alto.

The area is a 60-acre site and development will include a number of department store and group store facilities including 175,000 sq. ft. of floor space for The Emporium Company; 50,000 sq. ft. of floor space for I. Magnin & Company and 25,000 sq. ft. of floor space for Roos Brothers.

It is estimated the project will represent an investment in excess of $15,000,000.

Welton Becket, Los Angeles, is the architect.

IRON FIREMAN HAS NEW HEATING SYSTEM

Modern homes with extended floor plans, large picture windows, need more than a single thermostat to provide comfortable temperatures.

Iron Fireman Mfg. Co. has a new Selec-Temp heating system which features a thermostat in every room and continuous circulation of filtered air.

Steam generated by low pressure steam boiler; conducted through small copper tubing to compact individual room units; three sizes of units, 6,000, 12,000 and 18,000 btu per hour. Each heater fully automatic; turbine driven fan for circulating air through the unit; air filter, and self-contained non-electric thermostat. Low fuel costs.

LUMBER COMPANY FORMS PARTNERSHIP

J. E. Knapp has entered into partnership in San Francisco with William L. Bonnell, Jr., and Vincent D. Ward, in a newly organized wholesale lumber firm known as Bonnell-Ward & Knapp.

RESIDENCE HALL FOR WOMEN

Architects Herbert E. Goodpastor and W. C. Hayes of Sacramento are preparing working drawings for the construction of a 3-story, reinforced concrete Residence

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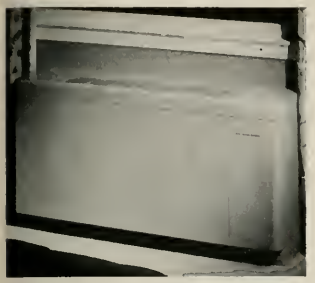
Hall for Women on the University of California campus at Davis.

The new unit will include a recreation and dining hall and administration rooms, as well as living facilities for 200 women students.

Estimated cost is $700,000.

MODINE ANNOUNCES NEW AIR CONDITIONERS

A new console type air conditioner has been announced by Modine Mfg. Co, Racine, Wis., designed for cooling, heating and ventilating individual rooms in hotels, apartments, motels, office buildings, schools, hospitals and residences.



Chilled water is used for cooling; hot water for heating. Each unit is served by only three pipes—water supply and return and drain. Fresh outside air ventilation introduced through aperture in rear of unit; damper controls mixture of fresh and recirculated air.

Distinctive in appearance; marine green, baked-on primer; installed in fully exposed or partially recessed; three speed motor control; twin access doors.

CARROLL J. RODDY ARCHITECTURAL REP.

Carroll J. Roddy of San Mateo has been appointed Architectural Service Representative for General Paint Corpn, according to an announcement by president Roy B. Robinette.

Roddy will work with E. R. Cluff, vice-president of the firm in charge of maintenance, contacting architects and engineering firms.

NEWLY DESIGNED TABLE LEGS BY ESTHER AND GROSS WOOD

Table shown here converts instantly from a coffee table into a dining table; the hinged base making it either 28" or 14" high.

Legs are supplied without top; customer obtains hollow core door (available at any lumber yard; all hardware is supplied including screws, hinges, and catches; entire assembly being made with only nine wood screws. Legs are 1/4" cold rolled steel rod with all joints brazed. Manufactured by Gross Wood & Company of San Francisco.

TRAILER COURT

Architect Leonard C. Neilson of Torrence is completing plans for the construction of a 76-unit trailer court, dwelling, and 2 toilet buildings in Torrence for Charles Stearns & Co.

The unit will comprise frame and stucco construction, concrete slabs, plaster walls and ceilings, gas heaters, 200-gal. water heater, ceramic tile and hardwood floors in dwelling, flagstone or concrete paving, steel sash, sewer, water and gas mains, streets, sidewalks, curbs and gutters.

ARCHITECT SELECTED

Architect George L. Wilcox of Monterey, has been chosen by the Monterey Elementary School District, to design and draft

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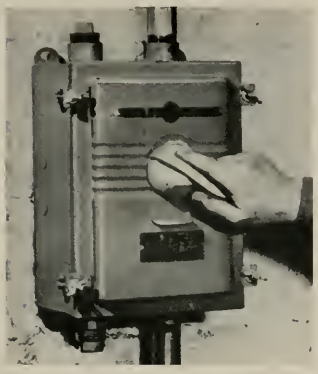
specifications for the construction of a new Elementary School to be built in the Seaside area.

The building will contain 11-classrooms, 2-kindergartens, 2-special rooms, multi-purpose room, kitchen and toilets, and will be of frame and stucco construction.

A grant of $550,000 (Federal) has been approved.

SAFETY SWITCH OR CIRCUIT BREAKERS

Lead plated, sheet steel enclosures for safety switches and circuit breakers, an innovation in the electrical industry, are designed for outdoor use and other special applications where cast iron enclosures were previously used.



These new enclosures will find wide applications where humid, dust-laden and corrosive atmospheres prevail, such as a wide variety of manufacturing plants. Easy to handle and install. Manufactured by Trumbull Components Dept., General Electric, Plainville, Conn.

SF AIRPORT RESTAURANT

The Public Utilities Commission of the City of San Francisco has completed arrangements with the Interstate Corpn. of Chicago, Ill., for the construction and operation of a restaurant, coffee shop, cafeteria, and cocktail lounge in the new Airport Terminal building now under construction at the San Francisco Municipal Airport in San Mateo county.

Architect W. P. Day & Associates of San Francisco, and Associate Architect Fred Schnid of Los Angeles, are designing the facilities which will cost an estimated $500,000.

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JOHN CARL WARNECKE, A.I.A., ARCHITECT

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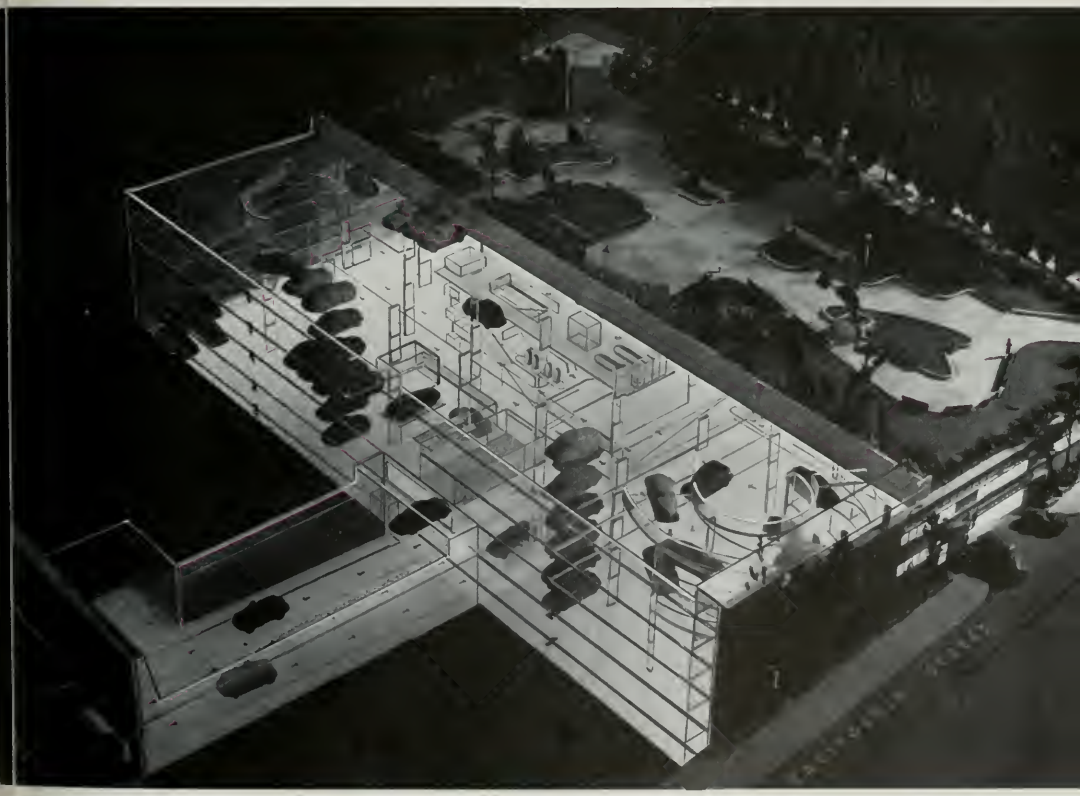
ARCHITECT AND ENGINEER

ST. MARY'S SQUARE GARAGE, San Francisco



HAAS & HAYNIE, General Contractors

MAY 1954

Wm. Templeton Johnson, Architect

marble

"When the San Diego Trust & Savings Bank was built in 1928 the architects specified marble floors, ten inch marble base, and six foot marble wainscot for the corridors throughout the building.

"Through all these twenty four years we are glad to report that the up-keep and maintenance of these corridor floors and wainscots has been negligible.

"We are gratified that our architects specified these high marble wainscots as this procedure eliminated the continual washing and frequent painting of the corridor walls with the attendant expense.

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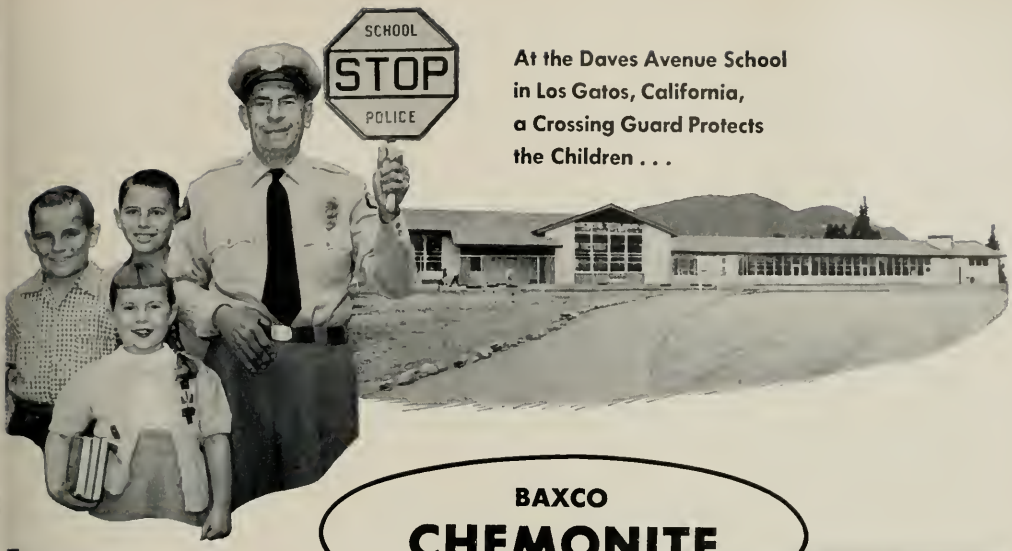

At the Daves Avenue School in Los Gatos, California, a Crossing Guard Protects the Children . . .

BAXCO
CHEMONITE

but a *SECOND* schoolguard protects the TAXPAYERS!

In building this school, BAXCO Chemonited Lumber was used throughout. Treatment standards of the American Wood Preservers' Association were rigidly observed

Like other communities, Los Gatos, California, is in an area where both subterranean and dry wood (flying) termites exist. Schools and other public buildings have been attacked by these insects. For extermination, authorities have had to resort to periodic expensive fumigations—at an average cost of $150 per room. And fumigation does not protect the structure from a reappearance of the termites.

Faced with this problem in designing the new Daves Avenue School, the architectural firm of Evans & Lincoln, San Jose, California, evolved the solution of using pressure treated termite and decay resistant lumber throughout.

After a study of available wood preservatives, Mr. Evans specified that all lumber was to be pressure treated with Chemonite. This salt-type wood preservative leaves lumber clean, paintable, non-oily and odorless. It will resist all attacks by termites or rot organisms for the life of the building.

The cost for protecting the entire school structure with BAXCO Chemonited Lumber was about one and one-half times more than the cost of one fumigation, according to Mr. Evans. But since fumigations may be required every few years, the use of Chemonited (chemically preserved) wood will prove an economy in future years through lower annual maintenance costs.

To protect against termite damage for the life of the buildings, BAXCO Chemonited (pressure treated) Lumber was used for sill plates, wall studs, rafters, and sheathing.

J. H. BAXTER & CO.

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Please write for "BAXCO Chemonited Forest Products," our new 32-page illustrated story-in-color on the values and uses of BAXCO pressure treated structural wood.

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here's how:

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Gladding, McBean design consultants work with the architect from conception to finished structure to insure the most effective and economical use of the product. Application of modern adhesion-type C.V. is both simple and fool-proof.

Pictured below are eight steps to a permanent and perfect installation.

1 Ceramic Veneer units must be soaked in clean water for one hour before using. Wall surface should also be damp at time of setting.

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3 To insure permanent bond between Veneer and structure, the wall surface is also brush-coated with the same Portland cement mixture.

4 Next, slightly more than ⅜ of an inch of mortar is applied to the C.V. unit. The same amount is also applied to the wall area.

5 The C.V. unit is then set in place. Excess of mortar will be forced out of joints from the back, leaving a ¾ inch mortar bed.

6 It takes the mason only a few seconds to position the C.V. unit and check it with a level. This insures a true wall plane.

7 He then taps the unit with a rubber mallet to fill all voids, forcing the excess mortar out of joints. Spacers are removed after initial set.

8 Face joints may be raked out and pointed with fine mortar. To complete the job, surface is washed with clean water.

*Ceramic Veneer

by Gladding, McBean

Los Angeles *San Francisco*
Portland *Tacoma*
Seattle *Spokane*

Vol. 197 No. 2

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★

COVER PICTURE

ST. MARY'S SQUARE
FIVE STORY GARAGE
San Francisco

JOHN J. GOULD, Engineer

HAAS AND HAYNIE,
General Contractor

Opened to the public on May 12th, 1954, it is the second major underground public garage to be built in the City of San Francisco. One block from Chinatown, adjacent to the financial district and but a few blocks from the downtown shopping area, the plant will accommodate 1025 automobiles.

For complete story and illustrations, see page 10.

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. EDITORIAL NOTES .

COMPETITIVE BIDDING

Officials of the American Society of Civil Engineers, oldest national organization of engineers in the United States, have vigorously protested action of the State Highway Department of the State of South Carolina in advertising for competitive bids for engineering services that involved some $3,500,000 worth of highway department projects.

Objection to the policy of competitive bidding for engineering services was based upon the principle that the fundamental basis of competitive bidding is to regulate costs, and that regulation of professional skill and ability on a cost basis is "not in the public interest" and would result in "cheap design" and ultimately higher costs.

The Society also contended the engineering service, like legal and medical, "is not a question of sound business principles alone, but of ethical procedures or standards of professional practice."

Recognizing that there are a number of factors involved in this situation, and possibly there is more to the specific problem in South Carolina than meets the eye, we are thoroughly in accord with the objections raised by the Society of engineers. The action of the highway department in South Carolina in itself is of little significance, however it definitely establishes another link in the chain of governmental control and encroachment into the field of professional practice and individual enterprise and opens the door a little wider for a more aggressive, and possibly less scrupulous, public servant to widen the already too wide gap of prudent governmental practice.

Selection of architectural and engineering firms for the preparation of plans and specifications for public works should be based upon the professional qualifications necessary to assure a satisfactory performance of the service required.

South Carolina's public officials would be wise in heeding the voice of the nation's engineers.

* * *

The Eisenhower administration has brought the level of expected Federal spending for next year down more than $12 billion from the figure originally set by Truman for the present fiscal year.

* * *

THE EMBRYO BOOM

The picture of declining population growth with its implications—to some—of a "mature" economy has changed so radically that we seldom give it thought any longer. Business has come to depend upon the seemingly inexhaustible demand generated by the population boom. But we may still have ghosts of the population depression of the thirties returning to haunt us.

Marriage rates have declined steadily since their peak in 1946. This, of course, affects the myriad markets that relate to marriage and household formation. Household formation has been holding up far better than marriages—more aged couples, widows and single people are setting up housekeeping. But the decline in marriage rates may continue for some time—until the "boom" babies start to get married around 1960—and should result in some decline in household formation in the next few years.

The reasons for declining marriage rates are simple—we are running out of unmarried girls. The girls getting married today are, in large part, the children born in the early thirties. There were fewer of them to begin with, and a large proportion of them are already married.

But population trends for the next few years are not all dark. A tremendous postwar shift of population to the suburbs has played no small part in maintaining high levels of output in construction and allied industries. The population should continue growing at a rapid rate. The long term decline in family size seems to have ended as more and more women are having two and three children. And the boom babies of the past decade are growing up and with them is growing the need for new schools and facilities of all kinds. And then of course . . . wait till 1960!

* * *

The Open-end mortgages could be the solution to the modernization financing problems of millions of American families — according to the Plumbing & Heating Industries Bureau.

* * *

TAX COLLECTIONS

During the 1953 fiscal year, an amount equal to $488.04 for every man, woman and child in the United States was collected in taxes.

The 48-States collected some $10,542,000,000; while the Federal government was taking $65,200,000,000.

Few people actually realize the amount of taxes collected annually by state and Federal government, and the above totals, taken from the U. S. Census Bureau reports, would be considerably larger if ALL taxes were included, i.e. City and County.

Taxes are essentially a part of the American way of life . . . the important factor is the spending of tax monies. Waste and inefficiency in government should not be tolerated and the only way you can control tax spending is by electing honest, capable men and women to represent you in city, county, state and federal governing bodies.

Model of Equitable Life Building, San Francisco. Architects: A. J. Loubet & W. B. Glynn, Successors to W. D. Peugh. Contractor: Dinwiddie Construction Company.

For Lasting Beauty

the architects chose

Vermont Danby Veneer

for facing the 25 story Equitable Life Building now under construction in San Francisco.

VERMONT MARBLE COMPANY

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NEWS and COMMENT ON ART

M. H. deYOUNG
MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, offers a diversified schedule of exhibitions and special events during the month.

EXHIBITIONS — Masterpieces of Pre-Columbian Gold, a special exhibition organized in collaboration with the Metropolitan Museum of New York and the National Gallery in Washington, D. C. The exhibit comprises a selection of eighty pieces of pre-Hispanic goldwork from the unrivaled collection of the Museo Del Oro of the Banco de la Republica of Bogota, Columbia.

The Pictures in our Minds—Emotion and Image, is an exhibition of art works done by persons during or after periods of emotional disturbance—especially arranged for Mental Health Week by the Junior Committee of the deYoung Museum Society in collaboration with the Mental Health Society of San Francisco.

Drawings and Sculptures, by Ugo Adriano Graziotti; Etchings, by Cadwallader Washburn featuring a retrospective exhibition lent by Dr. Ludwig Emge; and Into the Child's World—representing the 5th Annual Young Children's Art Show of San Francisco.

SPECIAL EVENTS—Include conducted tours of the Museum; classes in art appreciation for both adults and children.

CALIFORNIA PALACE OF THE
LEGION OF HONOR

Located in Lincoln Park, San Francisco, and under the direction of Thomas Carr Howe, Jr., the following exhibitions have been scheduled for May:

EXHIBITIONS — Contemporary British Lithographs, 1948-1952, lent by the Museum of Modern Art, New York City; Paintings on Glass by Marta Huth; 78 Years of Magnin Elegance, a special loan exhibition of manequins portraying the important "fashion years" from 1876 to 1954, assembled by I. Magnin and Company; 30 Years of Expressionism, 1904-1934, an exhibition of prints, lent by the Museum of Modern Art, New York City; Watercolors and Drawings by Gavarni; and Bead Fantasies by Edna Hesthal.

The Achenbach Foundation for Graphic Arts is

(See page 33)

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING, CIVIC CENTER

View
"OVER THE CITY"
oil
(29 x 39¾ in.)
by
Oskar Kokoschka

Gift of Mrs. Adolph Mack

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provides "that substantial look" for

H·J·HEINZ

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AT TRACY

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designing engineers · strobel & salzman
structural engineer · donald r. warren

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SERVING NORTHERN CALIFORNIA

Affiliated with Structural Clay Products Institute

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Inside or Outside A CLAY BRICK WALL · · · BEST FINISH OF ALL

Ward & Bolles, A.I.A., Architects

NEW GENERAL OFFICES
VERMONT MARBLE COMPANY

SAN FRANCISCO, CALIFORNIA

By FRED JONES

Seventy years in business on the Pacific Coast is a record the Vermont Marble Company may well be proud of. Since 1884, thirty-nine years after California was admitted to statehood, the Vermont Marble Company has been identified with the building progress of the West Coast's important cities. Monumental structures, both privately and publicly owned, are testimonials of the firm's accomplishments over a period of years.

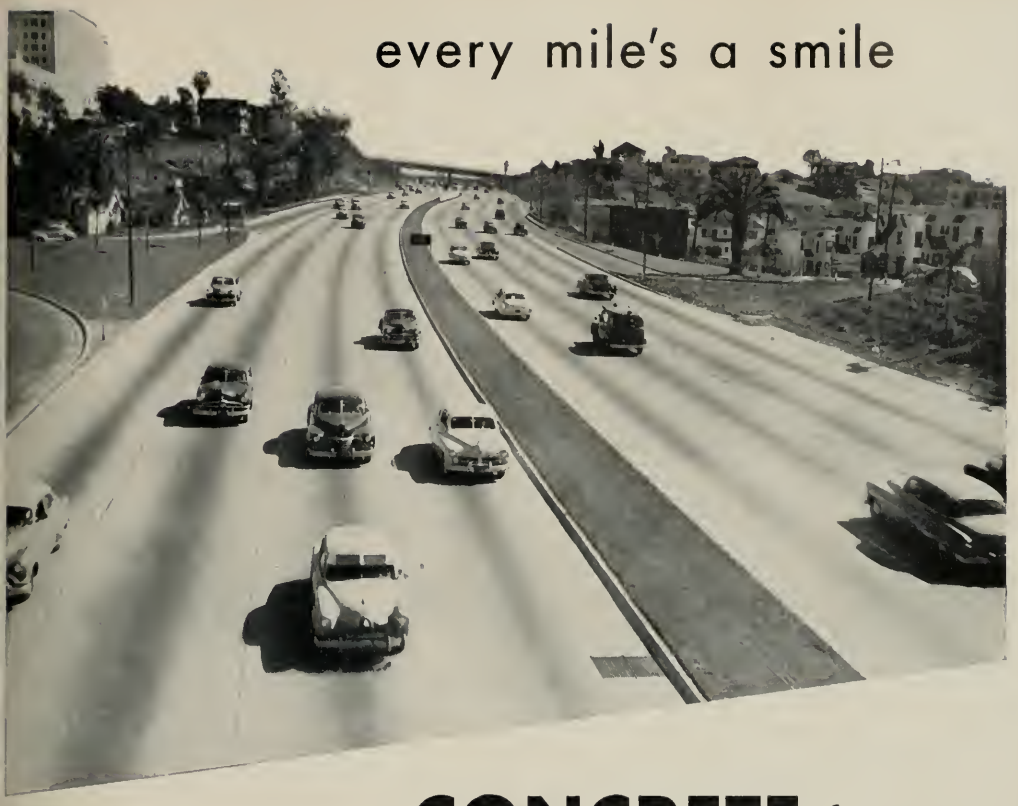
Recently completed and occupied, the company's new office building at 6000 3rd Street, San Francisco, which was designed by architects Ward & Bolles, A.I.A., in cooperation with the firm's entire office staff, serves to centralize its executive and manufacturing activities and makes for a greater overall efficiency. The above photograph, and the plant interior illustration, show structures which moderately reflect today's progressive trend in industrial architecture. Adequate windows provide natural daylighting for every room. All of the offices are done in a restful color scheme which the management has found contributes to greater working efficiency.

H. C. Fassett, manager, points with pride to some of the more important marble installations his company has made, among them the I. Magnin stores in San Francisco, Los Angeles, Beverly Hills, and Seattle, Washington; the State Capitol building in Olympia, Washington, and a number of others.

The most recent contract is with the Equitable Life

(See page 24)

every mile's a smile



on a **CONCRETE** freeway

Whether you are commuter or contractor,
tourist or taxpayer, all will agree
that there's nothing like concrete for freeways.
Remember concrete—lower in annual cost,
rarely out of service for maintenance,
longer lived, safer to drive,
and easier on the pocketbook.

PORTLAND IDEAL CEMENT

IDEAL CEMENT COMPANY

PACIFIC DIVISION

13 Plants Serving the Nation, Coast to Coast and Border to Border

SITE CLEARED—EXCAVATION WELL STARTED

ST. MARY'S SQUARE UNDERGROUND GARAGE

SAN FRANCISCO, CALIFORNIA

By HENRY J. DEGENKOLB, Chief Engineer for
John J. Gould, Consulting Engineer

HAAS AND HAYNIE
General Contractors

JOHN J. GOULD
Consulting Engineers

CONSULTANTS

G. M. SIMONSON
Electrical and Mechanical Engineer

RUDOLPH IGAZ, JR.
Architect

ECKBO, ROYSTON & WILLIAMS
Landscape Architects

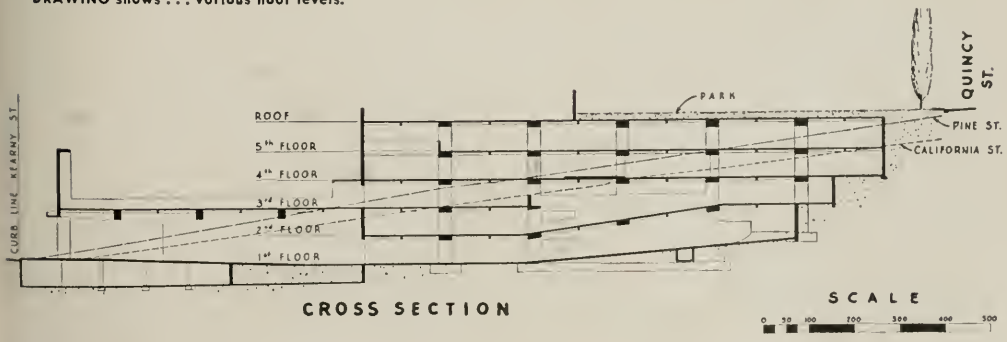
DAMES AND MOORE
Foundation Consultants

The St. Mary's Square Garage, located one block from the financial and business district, one block from Chinatown and a few blocks from the downtown district, was opened to the public on May 12, 1954.

The garage, providing 810 regular car stalls and a capacity of 1025 automobiles, is an example of what can be done with cooperation of city government and private enterprise. In June 1952, the City of San Francisco issued a call for bids for the leasing of the area of St. Mary's Square and some adjacent city property. The lease was to run for a maximum of 50 years and the consideration for this lease was to be the construction, at private expense, of a garage with at least 750 car capacity, along with monthly payments to the City of a percentage of the gross income with a guaranteed minimum. Among the requirements in the call for bids was that the park of St. Mary's Square must be replaced.

Three bids were submitted and after examination and study by various city agencies, the bid was award

DRAWING shows . . . various floor levels.



EXCAVATION

and

CONSTRUCTION

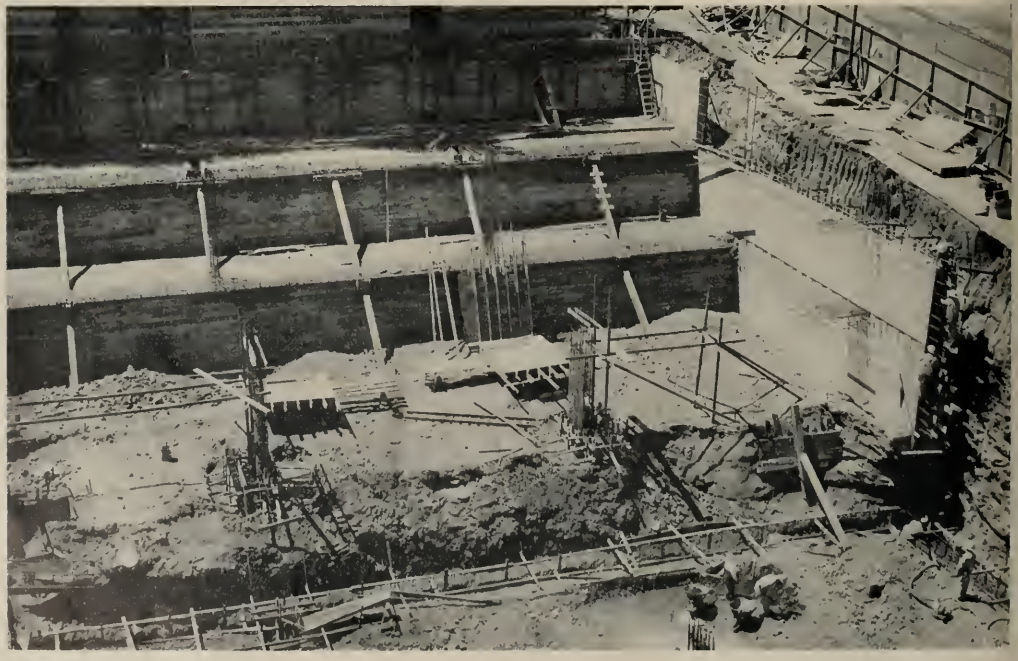
of central ramp (ramp No. 1). This area was constructed first so it could be used as buttress to the other areas.

ed to what is now known as the St. Mary's Square Service Center, Inc., headed by B. A. Farlatti, S. E. Onorato and Ken Royce. The General Contractor was Haas and Haynie, San Francisco, and the designer and engineer was John J. Gould.

DESIGN

There were several basic considerations in the design of the garage. One was to provide for absorbtion of a large number of automobiles from the ad-

Area near California Street wall with the excavation completed to the first floor level. NOTE bracing of the north-south walls and keys in California Street walls for the floor systems.



joining heavily traveled streets; another was to provide a speedy and efficient traffic pattern within the garage, and perhaps the most important consideration was the problem of excavation and construction procedure on this rather steeply sloping site, which has a grade of about 15%. Five stories were necessary to provide the minimum number of stalls and these five stories required a total excavation of 53 feet from the high point of the existing park to the first floor of the garage. Soil investigations showed about 10 feet of fill and then clay and shale becoming harder with depth. The slope of begging planes could not be determined from small borings nor could the possibilities of subterranean water. Slippage along one of these planes was also a possibility. If a vertical cut 53 feet deep and 275 feet wide were made into the hill, there was a distinct possibility of bad slides and damage to adjacent streets, utilities and buildings. In addition to this it would require extremely heavy shoring and greatly increase construction costs.

In order to reduce these hazards, it was decided to start with a relatively shallow cut at Quincy Street, the upper part of the property, and step the building down toward Kearny, the lower street. As a further precaution the building line was kept 17 feet inside the property, thereby providing additional construction room and allowing the existing poplar trees to remain in place during construction. Not only did this remove the necessity of replanting but it was felt the roots would help hold the top portion of the soil.

The stepped design had other advantages. It reduced the total amount of excavation, reduced the lateral soil pressure on the buildings, and provided a structure more stable against the forces of possible earthquake.

CUSTOMER USE

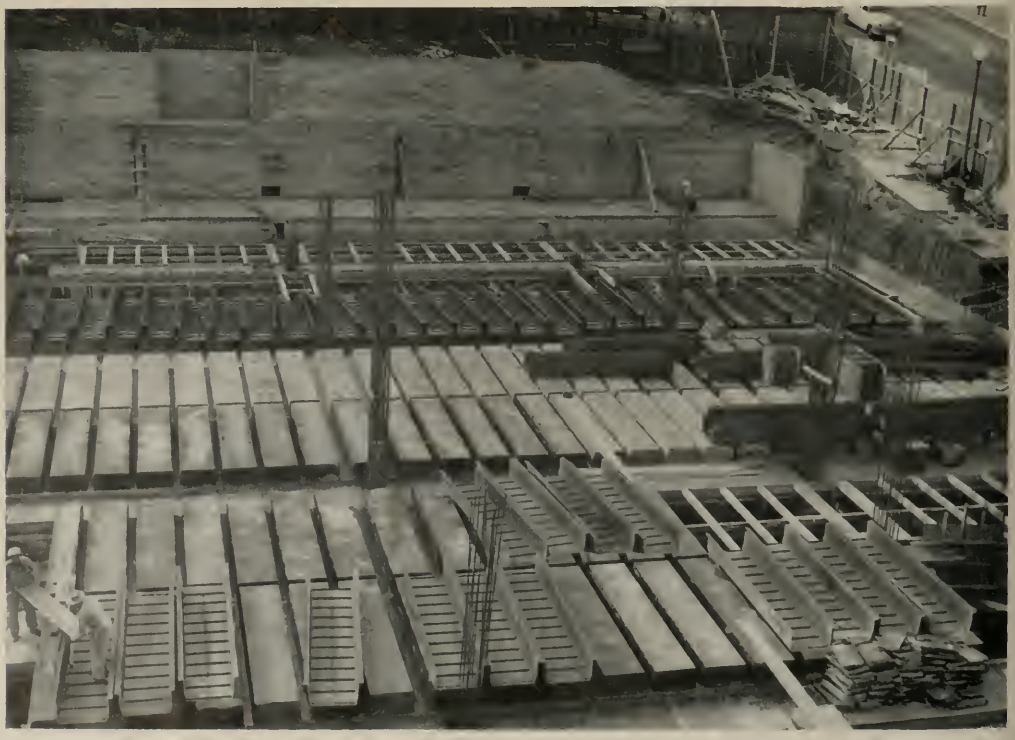
To meet the garage's utility requirements, three separate entrances and exits were provided; one on Kearny Street, one on California Street, both of which handle two-way traffic, and one on Pine Street which

View of the Pine Street section, completed through the third floor, with forms being placed for the fourth floor. NOTE semi-circular ramp, stepped walls.

CLOSE-UP VIEW

of "long span" pans framing into bridging. NOTE the notches which hove been provided to receive the flanges on the pans.

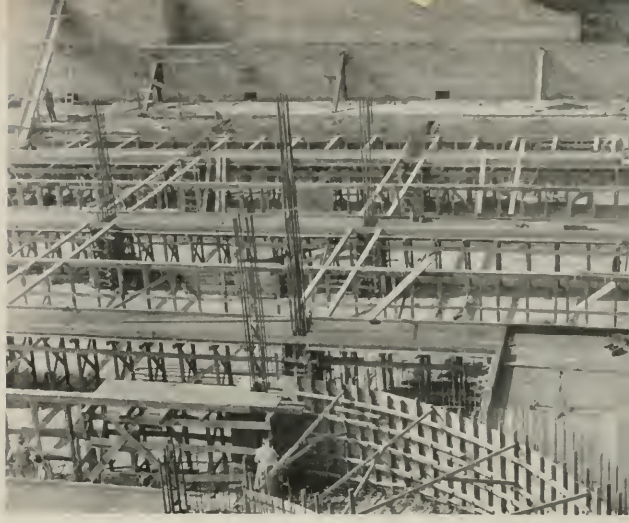
Pon forms in place on the fourth floor near California Street. NOTE how the column bars extend two stories to eliminate any crowding at the splices.



INSTALLATION
of
WOOF FRAMES

for construction of the fourth floor on California Street side.

The steel pan forms will be placed between the girders and the bridging.



Romp Number Three leading from the fourth to the fifth floor.

has traffic going west up Nob Hill. The Kearny street entrance leads directly to the first floor, and has a reservoir space about 160 feet long. Entrances from California and Pine streets, both lead onto the fourth floor into a reservoir area about 240 feet long. Thus, these marshaling areas provide room for an additional 70 cars, as well as providing a cushion within the garage which enables it to siphon traffic off the streets without causing waiting or congestion.

To facilitate handling of vehicles within the garage a straight ramp, near the center of the building on the Kearny Street level, leads to the second floor. Directly above this is a straight ramp from the second to the third floor. Most automobiles entering at Kearny Street will be parked on the first and second floors, with the third floor being used for cars coming in from Pine Street.

At the ends of both reservoir spaces on the fourth floor are located semi-circular ramps. A car coming in from Pine Street would go down the north ramp to the third floor and park. Upon leaving, it would come up the south ramp and exit on California Street. Similarly a car coming in from California Street would take the south ramp up to the fifth flooor to be parked, and upon leaving would come down the north ramp and proceed out to Pine Street.

On the fourth floor, the public area is located between the two aisles and is served by an escalator from the first floor which enables the public coming in on the Kearny Street level to have ready access to the entire garage without having to climb any stairs or ramps. This area contains the waiting room, cashier's booth and public telephones. Also on the fourth floor are all facilities for washing, lubrication and sale of gasoline, as well as public rest rooms, offices and employees locker and rest rooms.

The first floor also contains a cashier's booth and public waiting area along with public rest rooms, telephones and gasoline pump facilities, so that for all practical purposes the first and second floors can be operated as an independent unit from the rest of the garage, if so desired.

CONSTRUCTION

San Francisco is located close to both the San Andreas fault and the Hayward fault, both of which are known to be active and therefore it is necessary to

ANOTHER VIEW

showing details of the wall construction on the side of Ramp Number 1 from first to third floor. NOTE the concrete duct at bottom.

design structures in this area to be able to resist the forces of an earthquake. The floors of the St. Mary's Square Garage are designed as diaphragms to span horizontally to the major resisting elements. Because there are no interior walls above the third floor, the fourth and fifth floors and the roof had to span some 270 feet! This long span, plus some fairly heavy design loads necessitated some relatively heavy chord steel, especially where notches were taken out of the floor at the ramps and over the lubrication hoists. For an example of the design load due to earthquake, the co-efficient at the roof, required by code, is 8% times the total design load. The average design load on the roof is some 400 pounds per square foot. This load over the total area and times 8% produced a lateral force due to earthquake of 1700 kips. The roof also carries an additional 300 kips of lateral force due to earth pressure behind the uphill wall.

From the first floor to the third floor, there is a wall 63 feet long on both sides of the central ramp. This provides an additional resisting element and reduces the span of the second and third floors.

FRAMING

Much consideration was given to different framing schemes in order to arrive at the most economical solution of this particular job. Column spacing was a

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18" x 36" columns from the fourth floor to the fifth floor are smaller to provide wider aisles. NOTE a typical column used elsewhere in the construction is 18" x 54".

General view of roof framing.

PHOTOS by FOREMANS

CABANA

SWIMMING POOL and PATIO

RESIDENCE OF MR. & MRS. LESTER JINKERSON

SAN MATEO, CALIFORNIA

ROBERT M. SHERMAN
Designer

ROBERT LIPPI
General Contractor

COST $23,000

PROBLEM—

It was necessary to design the cabana, which would also serve the swimming pool and patio area, so that it fit into the existing Spanish architecture of the main residence, even though the available space was limited and irregular in shape. Owners of the home also desired an addition outside suitable for year-'round entertaining of either adult or teen-age groups, and an addition that would provide a maximum of living comfort with a minimum of upkeep. It was also necessary to

provide for suitable prevention of unauthorized use. The pool was to include safety features for small children, full use for adult enjoyment and in general the project was to create a warmer, interesting, outdoor-living atmosphere.

SOLUTION—

An irregular "U" shaped cabana was decided upon which included a men's and women's shower room on a wing adjacent to the existing home with a covered breezeway between and an entrance door from the front yard in the breezeway. Kitchen, bar and barbecue facilities were provided next to the shower rooms to concentrate plumbing into a compact area and minimize installation costs. The general arrangement was established so

VIEW from cabana toward swimming pool

that a person preparing food or drinks would have a complete view of the swimming pool as well as the cabana, thus adults could easily watch children who might be at play in the patio area or swimming in the pool.

Italian quarry tile was used on the floors, worktops and backsplashes throughout for ease in maintenance. A blower type exhaust fan was utilized to pull any odor from the kitchen activities out of the room. Exposed beam ceilings and rough plaster were used for architectural effect and a complete acoustic treatment was installed to overcome any voice echo, or undesired noise, due to installation of the Italian quarry tile floor.

In seeking a suitable type of heating it was decided to install full radiant heating as this would assure wanted temperatures throughout the entire year regardless of outdoor weather conditions, and at the same time the radiant heating system could be maintained at a minimum of cost.

Built-in book and utility shelves and an alcove which is furnished with a couch, provide full facilities for quiet reading or complete relaxation. The entire cabana has a complete view of the patio and swimming pool, and also of the adjacent landscape and the distant San Francisco Bay. The cabana also forms a complete windbreak from the prevailing seasonal winds and at the same time offers complete privacy for resident or guest.

INTERIOR VIEW

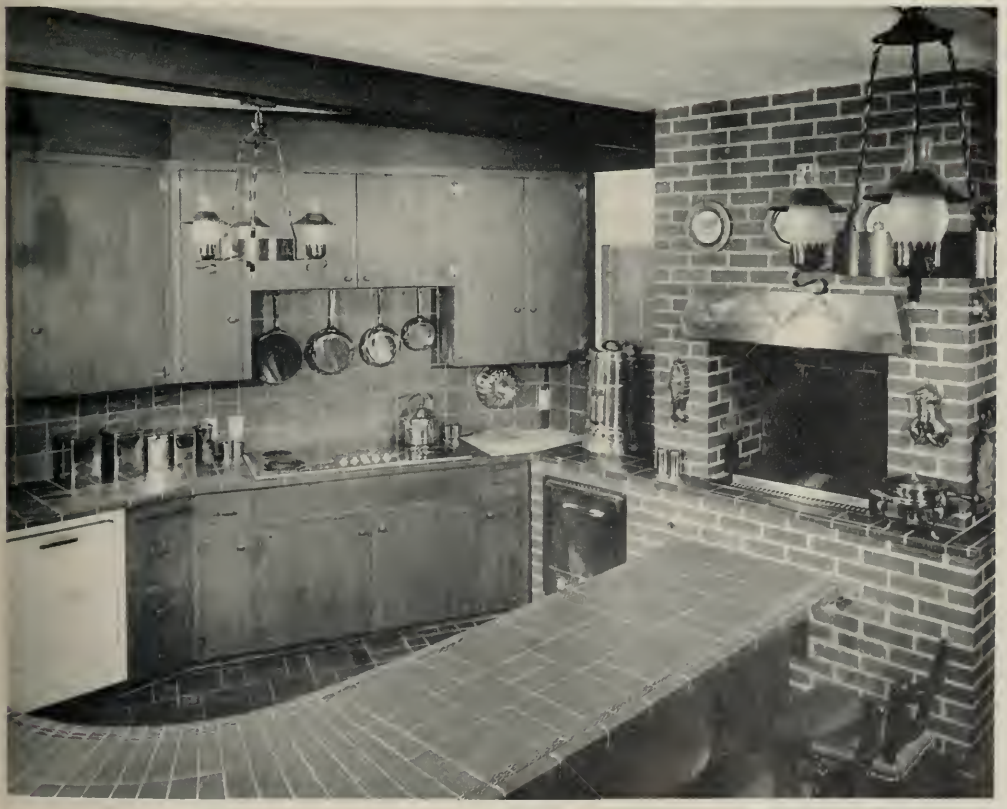
PATIO—

The patio is paved throughout with a soft terra-cotta colored concrete, and has an integral geometric pattern and a small border which can be utilized for a planting area to soften the overall picture if so desired.

SWIMMING POOL—

The swimming pool is "L" shaped with convenient entrance steps and one end designed for shallow water for those who do not know how to swim or may be learning. There is an auxiliary "L" wing which can be completely roped off from the deep water section where the diving board and metal ladder is located.
Provision has been made for heating the water of the pool so it may be used on a year-'round basis if desired.

FIREPLACE — Kitchen Corner



ARCHITECTURAL CONTEST

Sponsored by The Alameda County Heart Association

and the

EAST BAY CHAPTER OF THE

AMERICAN INSTITUTE OF

ARCHITECTS

Homes and offices redesigned for easier, less fatiguing living and working will be the result of a projected architectural design contest sponsored by the Alameda County Heart Association and the East Bay Chapter of the American Institute of Architects.

ARCHITECT Russell G. deLappe (left), Chm. Heart Ass'n Committee, East Bay Chapter, A.I.A.; Gordon Lamb, M.D., Chm. Cardiac in Home Committee, Alameda County Heart Ass'n; Fereydoon Ghaffari, U.S.C.; Arnold Fluckiger, Stanford; and Frank Krueger, U.C.

Representatives of the Heart Association and the Institute, and the schools of architecture at Berkeley, Stanford, and the University of Southern California met in Berkeley recently to discuss the problem posed to architecture by the reduced activity-tolerance of the estimated 10,000,000 people in America today who have one form or another of heart or circulatory disease. An important part of the problem was stated by Russell deLappe, Chairman of the Heart Association Committee of the East Bay Institute, as "Many people in middle life, when heart disease strikes, find that they have invested in homes whose staircases, kitchens, closet arrangements and gardens tax the strength of a person in perfect health. They either have to take chances with their health or sell out and move away from a beloved home.

"Executives find that otherwise well-designed offices were wholly unsuitable for working without dangerous fatigue.

"It should be the responsibility of architects to design all homes and work places in such a manner that they can be lived in by anyone who is capable of normal activities, even on a restricted level. This contest should stimulate the interest of architects in designing better facilities and the application of more suitable materials for use in the living environment for all cardiac cases, men as well as women. We have designed some pretty efficient kitchens, but much remains to be done with the rest of the house and grounds. And office design is behind home design. Both, for ease of working—and we 'work,' in one way or another, even at home more than we rest when we're out of bed—are far behind first-class factory design, where improvements always are measurable in dollars and cents."

At the meeting representatives decided that the

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Building Better Cities

Improving Communities and Broadening Construction Markets

By JAMES W. FOLLIN*

The ferment of interest throughout the nation in urban renewal has made clear that there are two principal approaches to the problem of building better cities. The first has to do with a crusade for citizens; the other has to do with administration of a program of renewal.

The crusade requires mobilization of civic organizations and citizens representing a cross-section of each community. It is based on a recognition that the plight of our cities has become desperate, that strong measures must be taken to save them from a continuing deterioration which can lead only to bankruptcy, that the initiative must be taken locally, and that the leadership must be supplied by the responsible business and civic organizations of the community. It has already demonstrated that where the will to win back the deteriorated portions of our cities exists, a program of effective local action can be developed. It has started a fire which seems destined to sweep the country.

In any locality leaders such as those represented in this room can gather the facts about living conditions in blighted and slum sections of the city. These facts will tell their own story. They will demonstrate that

*NOTE: James W. Follin is Director of the Division of Slum Clearance and Urban Development, F.H.A., Washington, D. C. and spoke at the recent annual meeting of the Chamber of Commerce of the United States, held in Washington.

slums are being created faster than they can be eliminated; hence, slum prevention may be more productive than slum clearance. They will reveal that too great a proportion of the total taxes of the city are spent on the relatively small areas of slums; that disease, juvenile delinquency, and crime which menace the entire citizenry, breed in such slums; and that corrective measures can be taken. They will appeal broadly to community groups and challenge their participation in a program of eradication. They will bring pressures on public officials to take necessary action to have the conditions remedied.

Once the crusade has been successful and the community has dedicated itself to the job of urban renewal, a sober, thorough, technical program has to be developed to accomplish the objective. This must begin with community planning. If there is not already an overall plan for the future growth of the community as a whole, such must be prepared. Then there must be detailed studies of specific areas to be improved. There must be analyses of housing requirements and particularly for minority families. There may be need for enabling legislation for the enactment of appropriate codes and ordinances—especially with respect to conditions of housing occupancy—and a strong machinery of code enforcement. Adequate administrative organization must be available to handle the many and complicated details of the program. There must be the ability to finance the renewal program. There must be a plan to insure relocation of displaced families in decent housing. There must be provision for the widest possible participation of citizens both in the areas to be treated and on a city-wide basis.

The Federal Government's part in such a program is that of aiding the local efforts. It is not a substitute. It cannot be successful apart from all the local effort suggested above. However, once a locality has embarked upon a program and finds the need for Federal help, your Federal Government stands ready to advise and counsel with you and to assist you in any way it can. If pending legislation becomes law, Federal loan and grant assistance will be available for urban renewal projects of a broad scope. Grants may be used to pay upwards to two-thirds of the net cost of a renewal project. Federal financial assistance may be almost indispensable where cities do not have means to construct public improvements or to accomplish the clearance necessary to upgrade the blighted area.

What can this kind of a program mean in terms of volume of construction? One indication is the estimate that redevelopment of 52 slum areas for which Federal loans and grants have been approved under existing legislation will result in construction outlay of approximately $497 million. This is divided as follows: $271.3 million for housing; $53.5 million for commercial construction; $48 million for industrial construction; $107.7 million in public and semi-public construction, and $16.7 million for site improvements.

If the proposed legislation becomes law, urban renewal activity will be stepped up greatly and this program will be made an even more important factor in providing construction work for the industry.

COL. CARL Y. FARRELL, C.E., GIVEN ALASKA ENGINEERS COMMAND

A new Alaska District Engineer assumed command of the Corps of Engineers in Anchorage, May 1st, when Col. Carl Y. Farrell, C.E., took over the duties of Col. Louis H. Foote, who has been promoted to Division Engineer for the Corps' North Pacific Division.

COL. CARL Y. FARRELL, C.E.
Alaska District Engineer

As the Assistant District Engineer under Col. Foote since 1952, Col. Farrell has been in close contact with the multimillion dollar defense construction program being supervised and administered by the Corps of Engineers in Alaska. Thus far more than $500 million in construction has been accomplished under the defense program at Air Force and Army installations in the far northern territory.

Featuring the work in progress under the defense program in the Territory at present is the $30 million Haines to Fairbanks pipeline. Work on the 621 mile long pipeline began this year. On completion in September 1955, it will provide the main supply for essential military fuels pumped from the Port of Haines, in Southeastern Alaska, to Fairbanks in the Interior.

As District Engineer for Alaska, Col. Farrell is also responsible for the civil functions of the Corps of Engineers which include river, harbor and flood control work. Another primary function of the Alaska District is in acquiring, managing, and disposing of the real estate essential to the operations of the Army and the Air Force throughout the Territory.

Headquarters for the Alaska District is at Anchorage and field offices are maintained at Nome, Haines, Whittier, Big Delta, Kenai, Fort Richardson, Ladd Air Force Base, Eielson Air Force Base, and Elmendorf Air Force Base to supervise the far-flung construction work under the defense program. In terms of area involved, the Alaska District is the largest Corps of Engineers District in existence.

Col. Farrell has compiled a notable engineering and military record since 1932 when he was called to ac-

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VERMONT MARBLE CO. . . .

(From page 8)

Company, which is currently erecting a 25-story office building at the corner of Montgomery and Sutter Streets in San Francisco. This new structure will be faced with Vermont Danby veneer, according to specifications and designs prepared by the architectural firm of A. J. Loubet and W. G. Glynn, successors to W. D. Peugh, Architect. Dinwiddie Construction Company of San Francisco is the general contractor on this building, which is the largest office building to be erected on the West Coast in several years.

In late years there has been a degree of expansion in the company's activities to include marble and granite veneer work in addition to fabricating and installing all types of interior marble.

The Vermont Company's first West Coast office was located at 512 Jackson Street, where it served merely as a sales office for the Producers Marble Company, a partnership which included besides Vermont, the Dorset Marble Company, Sheldon & Sons, Ripley Sons and Gilson & Woodfin—all Vermont marble producers.

Although formation of the Vermont Marble Company as a New York corporation took place in 1880, there were other marble concerns active in Vermont and competition became increasingly keen. Then it was that Governor Redfield Proctor organized the Producers Marble Company to handle sales of the five competing companies. Thus it was that Vermont came West, first to be listed with the Producers Company, and later to assume its own name and conduct its business under that name. Offices were established at 244 Brannan Street and were jointly managed by Charles A. Field and J. Hawley. In 1913 Hawley took over and managed the company's affairs throughout the troubled days which followed the 1906 earthquake and fire, which incidentally destroyed a portion of the Brannan Street plant and offices.

In June 1915, the Panama-Pacific Exposition was held in San Francisco and that year Fred G. Holden succeeded Hawley as West Coast manager. Branch offices were opened in Portland and Vancouver and a plant was established in Tacoma, Washington, where much of the marble quarried in the company's Alaska quarries was finished.

H. C. Moore became manager of the San Francisco office in 1922 and continued in such capacity until he became assistant general sales manager in 1925, at which time E. C. Porter was appointed manager on the West Coast.

The interest in and sale of Vermont Marble con-

VIEW of well-lighted spacious, manufacturing plant

tinued to grow in the Pacific Coast area so that in 1926 there was opened a sales office in Los Angeles.

During this time the three-story, wooden building at 244 Brannan Street, which was intended to serve as a temporary structure, became a permanent one for both office and plant until the summer of 1932, when the office was moved to the Underwood Bldg., where it remained until recently, when it was moved into the new and spacious quarters at 6000 Third Street, adjacent to the plant.

In 1937, T. M. Howard became manager of the West Coast offices and plant, serving in that capacity until 1942, when H. C. Fassett, the present manager, took over.

Perhaps the largest consignment of blocks ever to reach San Francisco was the 1,420 ton shipment from Alaska via the steamer Wilmington in July 1915.

NORTHWESTERN UNIVERSITY OPENS NEW METALLURGICAL ENGINEERING DIVISION

A new graduate department in metallurgical engineering has been established at the Northwestern University technological institute, Evanston, Ill., according to a recent announcement by Donald H. Loughridge, dean.

The new department will go into operation with the beginning of the fall term this September and will offer master's and doctorate degrees in metallurgical engineering.

Faculty appointments selected and announced by Dean Loughridge include Morris Fine, professor, presently with the Bell Telephone Laboratories, Murray Hill, N. J.; Jacob P. Frankel, associate professor, formerly lead metallurgist with the California Research and Development Company; and Donald H. Whitmore, assistant professor, a member of the Institute's faculty since 1948.

N.A.H.B. COMMITTEE TO CONFER WITH FEDERAL HOUSING OFFICIALS

R. G. Hughes, president of the National Association of Home Builders, appointed a special committee of the nation's leading home builders to confer with Government housing officials on procedures of the Federal Housing Administration and on legislative measures designed to strengthen public confidence in the agency.

Members of the N.A.H.B. will meet with Albert M. Cole, Administrator of the Housing and Home Finance Agency and acting F.H.A. Commissioner Norman Mason. Named to serve as members of the committee are: Nathan Manilow, Chicago, 1st vice-president of N.A.H.B., chairman; Emanuel M. Spiegel, New York City; N.A.H.B. secretary Franklin L. Burns, Denver; E. J. Burke, Jr., San Antonio; and Earl W. Smith, El Cerrito, California.

WILL INSURANCE COVER YOUR LOSS?

The second form of insurance to which Architects and Contractors constantly find reference to in specifications is Fire insurance.

Architects, in their efforts to afford the owner the best possible protection during the construction period, will vary greatly in their phraseology of the paragraph referring to the Fire insurance so that there is no standardization in this clause.

On new construction work the architect should call for insurance against loss from Fire, perils of the Extended Coverage endorsement, Vandalism, Malicious Mischief and, possibly, Earthquake. The amount of insurance should at all times equal the value of the completed work, plus materials and supplies on the job site.

HENRY J. TRAINOR
Consultant, Miller & Ames, Insurance Brokers

Insurance should be written in the name of both the owner and the contractor, with losses to be adjusted with and payable to both parties as their interest may appear.

The insurance should be placed and paid for by the contractor with an insurance company satisfactory to the owner.

Before a chorus of protests is raised by the architects who object to some of these points, we feel we should analyze our reasons for saying them.

A majority of architects already follow this same outline but many others will require the owner to purchase Fire insurance. This practice, we have found, leads to many unnecessary difficulties. Most specifications make the contractor responsible for all work until completion and acceptance. As a guarantee the work will be completed, the owner is furnished a bond. Hence, whether the work is damaged through an uninsurable flood or by an insured fire is actually of little consequence to the owner. For this reason, the choice of insurance companies is of primary importance to the contractor. A company with which he has established a relationship of years is more likely to resolve favorably a disputed loss than a cumpany to whom he is a complete stranger. In addition, the contractor will receive the services of his insurance representative.

There is frequently, for example, a question as to whether a building was damaged by an actual windstorm which is insurable or merely normal wind which is uninsurable. Since this is a matter of judgment, the contractor who must replace the damaged property in any event is most likely to receive reimbursement from his own company rather than a company chosen by the owner.

Frequently, specifications refer only to Fire insurance and if the owner is purchasing the policy the contractor's request for the Extended Coverage and Vandalism endorsements may be the subject of a dispute. If these coverages are purchased separately, by the contractor, the cost is substantially higher than if purchased in conjunction with the Fire insurance. If the owner is unfortunate enough to select an insurance company which fails to meet its obligations at the time of loss, generally no provisions are made to reimburse the contractor for his uninsurable loss and he has no recourse. If it were the contractor's mistake in purchasing the insurance through an unsound company, the owner would lose nothing because of the Performance Bond which will guarantee the completion of the work.

There are occasions when the owner will insist on purchasing insurance. In all fairness, the contractor should then be relieved of any responsibility for damage to his work caused by Fire, perils of the Extended Coverage and Vandalism; otherwise, the situation is analogous to asking him to bid without advising him of the job location or type of construction. In both instances, he is asked to buy a "pig and a poke."

EDITOR'S NOTE: The insurance brokerage firm of Miller & Ames, San Francisco, has for many years specialized in administration of insurance programs for all phases of the construction industry, and further explanation of any points raised in this series of articles will be gladly furnished upon request.

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PASADENA CHAPTER

William C. Eldridge, partner in the business management consultant firm of Booz, Allen & Hamilton, was the principal speaker at the May meeting, taking as his subject "Points an Architect Can Make" in presenting his services to prospective builders.

Margaret Stovall was presented the AIA first prize of $250, and Lee Merriam, editor of the Pasadena Star-News, the certificate of award by president Wallace C. Bonsall at the last meeting, both awards representing the national AIA selection in the field of architectural journalism.

New Members: Include Herb Seipel, transfer from Coast Valleys Chapter, and Charlie Ware. Associate members Jack Partch and Phil Patterson.

KRAFTILE

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EAST BAY CHAPTER

The May meeting, held in New Milani's Restaurant, Oakland, was a joint meeting with the East Bay Structural Engineers Society.

Dean William Wurster, School of Architecture and Prof. Harmer Davis, Engineering Department of the University of California at Berkeley, led a discussion of the architectural and engineering curriculum and pointed out the many changes which have occurred in the architectural and engineering courses throughout the past years.

Announcement was made that the June meeting would be the Annual Awards Ceremony, School of Architecture, University of California, and the meeting would be held in joint conference with the Northern California Chapter.

Orange County Chapter:
Philmer J. Ellerbroek, President; John A. Nordbak, Vice-President; Chas. A. Hunter, Treasurer; Gates W. Burrows, Secretary. Directors: Everett E. Parks, Chas. A. Hunter and Everett L. Child. Chapter office 1606 Bust St., Santa Ana.

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Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
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Producers' Council—Northern California Chapter (See Special Page)

SAN DIEGO CHAPTER

"Restaurant Standards as They Relate to Building Construction" was the subject of the May meeting forum with the following taking part:

Dr. Leon L. Gardner, Chief of Preventative Medicine, San Diego County; James P. Slater, Chief of Division of Sanitation, San Diego County, and Ed Beale, Chief Plumbing Inspector.

Chapter officers were recently requested to confer with Glenn Rick, City Planning Director, relative to minimum area for dwellings in the City of San Diego. There is no ordinance providing minimum space at present but city officials felt there should be in that a number of dwellings recently constructed contained but 297 sq. ft. of floor space.

Clyde Hufbauer and Frank Hope have been appointed to the two new places on the Board of Directors which were provided for by recent amendments to the By-Laws.

New Members — Fred Bortzmeyer, George Foster and Henry M. Hester, Corporate; Mark L. Faddis, Associate; and John A. Reed, Junior Associate.

OREGON CHAPTER

Robert H. Lochow, Structural Engineer, spoke on the subject of precast and prestressed expanded shale concrete and construction techniques involving these materials at a recent meeting. Many examples of the uses of concrete were described by the speaker.

CALIFORNIA COUNCIL OF ARCHITECTS

Donald Beach Kirby (Northern California Chapter) has been nominated for the position of A.I.A. Director of the Sierra-Nevada Region. The term runs for a period of three years and action on the nomination will be taken at the 86th Annual Convention of The American Institute of Architects in Boston, June 15-19.

Organization plans for the Annual Convention at (See Page 31)

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Structural Engineers Association of California

Harold P. King, President, Sherman Oaks; M. A. Ewing, Vice-President, Sacramento; Joseph Sheffet, Sec.-Treas., Hollywood. Directors, Ben Benioff, Ernest D. Francis, John J. Gould, L. W. Graham, G. A. Sedgwick, and W. T. Wheeler. Secretary's Office, 844 Seward St., Hollywood 38.

Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

William H. Peterson, President; Walter S. Wassum, Vice-President; O. T. Illerich, Sec.-Treas.; Ernest D. Francis, M. A. Ewing, and Arthur A. Sauer, directors. Office O. T. Illerich, c/o Div. of Arch., Sacramento.

American Society of Civil Engineers
Los Angeles Section

Sterling S. Green, President; Ralph W. Spencer, Vice-President; Walter B. Hollingsworth, Vice-President; C. Martin Duke, Secretary; Gilbert W. Outland, Treasurer. Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Steve Barnes headed a panel discussion on "Title 21" at the May meeting which was held in the Roger Young Auditorium, Los Angeles.

Participating in the general discussions were members of the California State Division of Architecture, C. M. Herd, Chief Construction Engineer; M. A. Ewing, Principal Structural Engineer, Sacramento office; Ernst Maag, Principal Structural Engineer, Los Angeles office; Manley W. Sahlberg, Principal Structural Engineer, San Francisco office, and members of the Advisory Board comprising Stephenson B. Barnes, Consulting Structural Engineer, Oliver G. Bowen, Bowen, Rule & Bowen, Harold N. Engle, Consulting Civil and Structural Engineer, and Harold Hammill, Consulting Engineer.

New members—Ronald B. Myers, Jr., Associate, and Gaetan M. Zucco, Allied.

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DONAS SEA

Forty-nine couples attended the first dinner dance to be given by the DONAS-SEA, sponsored by the women's auxiliary group of wives of members of the Structural Engineers Association of Southern California.

The regular May meeting was held at the Assistance League Club House in Hollywood.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

Rear Admiral John R. Redman, USN, Commandant Twelfth Naval District, was the principal speaker at the May meeting held in the Presidio Officers Club, Presidio of San Francisco, May 13.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The May meeting was a "Business" session devoted to committee reports, reports from Directors, and an outline of association plans for the future. Time was taken to view a special motion picture "Take a Look at Tomorrow."

Date of the annual picnic was announced as being July 17, and will be held at the Sonoma Golf and Country Club, near Sonoma in "The Valley of the Moon."

FEMINEERS

The 4th Anniversary of the FEMINEERS, wives of civil and structural engineers of Northern California, was observed with a dinner dance in the Villa

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
L. A. O'Leary, Chairman; P. V. Garin, Vice-chairman; H. P. Hoopes, Sec. Office Sec., 1550 Powell St., Emeryville, Calif.

Society of American Military Engineers—San Francisco Post
CDR N. M. Martinsen, President; L. L. Wise, 1st Vice-President; Col. Paul Berrigan, 2nd Vice-President; R. M. Hamilton, Secretary; Thomas Hurley, Treasurer. Directors, RADM C. A. Trexel, J. G. Wright, LTCOL C. S. Lindsey, C. E. Bentley, F. R. Fowler, BRIGEN D. F. Johns, and RADM L. N. Moeller.

De La Paix in Oakland on May 15.

Founded for the purpose of becoming better acquainted, the organization now has a membership of over 125, and among present activities is sponsorship of a scholarship fund at the University of California for an engineering student.

In charge of the anniversary party were: Mesdames William Brewer, Eric Moorehead, Arnold Olitt, Fred Pavlow, Burr Randolph and J. M. Sardis.

AMERICAN SOCIETY FOR METALS PUGET SOUND CHAPTER

C. B. Robinson, Supervisor of Process Promotion of the Pacific Coast for the Air Reduction Company was the principal speaker at the last meeting of the Society for the 1953-'54 season.

Robinson reviewed the development of the "Aircomatic Welding Process." This process, using a continuous, consumable electrode surrounded by an inert gas shield, allows fluxless arc welding, automatically controlled, and proceeding at high speeds. The process is relatively new, having been introduced to industry in 1948 after extensive study and development.

Robinson presented motion pictures during his discussion which pointed out some of the details of the process and showed its extreme versatility. Various inert gases are employed, primarily helium and argon, and combinations of these with carbon dioxide, and in some cases oxygen. The use of helium has certain advantages such as better wettability and requires less edge preparation, and is primarily used for material gages of 3/16 inch and over. Argon produces a cooler shield and affords better control of burn through in thinner gages. Although welding of aluminum alloys in gages below $\frac{1}{8}$ inch is not satisfactory, certain steel setups have been worked out using thinner gages.

Helium-argon has been used very successfully as a shield for welding copper up to $1\frac{1}{2}$ inches thick with no preheat. This is done in several passes with no interpass cleaning. Production rates and design possibilities in the field of copper fabrication have been greatly improved by this process. The process has also been used with outstanding success in the shell banding of artillery shells and rockets. This operation requires delicate control because of the close control of hardness required for the band.

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(See Page 31)

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PRODUCER'S COUNCIL PAGE

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Edited by Stanley L. Basterash—WESTERN ASBESTOS COMPANY

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ANNUAL SPORTSDAY

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BASEBALL GAME

Practice for the Big Game against the South
at the California Council of Architects Convention this fall.

Other sporting events include
swimming—for the more courageous—and horseshoes.

BARBECUE IN THE EVENING

REFRESHMENTS

This major event is co-chairmanned by John Cowley of the Brookman Company and Phil Brown of Otis Elevator with the most able assistance of Bob Harrington, Structural Clay Products Institute. These gents are putting every effort into making this event the most outstanding thus far this year. Ray Brown of Gladding McBean will chairman the Golf Meet. Incentive prizes will be given for winners in all events.

TRAVELING CARAVAN

We all agree the traveling caravan table-top exhibit was everything anticipated. Attendance topped 547 individuals. The tally included architects, engineers, draftsmen, manufacturers' representatives and some 32 of other classifications. Already considerable conversation has been devoted to suggested improvement and additional participation in the Caravan—1955.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

A.I.A. ACTIVITIES

(From Page 27)

Hoberg's in Lake County, September 30-October 2, were completed at the second directors and committee chairmen meeting in Santa Barbara late this month.

Malcolm Reynolds, Council President (East Bay Chapter) has been visiting a number of Chapters throughout the state.

ARCHITECT GEORGE P. SIMONDS HEADS CALIFORNIA STATE BOARD

George P. Simonds, AIA, Oakland, has been chosen president of the California State Board of Architectural Examiners and Floyd Rible, AIA, Los Angeles, and a member of the Board has been named to represent the state agency in discussions with the California Council of Architects in respect to revision of the State Architectural Practice Act.

WASHINGTON STATE CHAPTER

Plans are under way for members of the Chapter to travel by air to the annual American Institute of Architects convention in Boston, June 15-19, via special charter Transocean Air Lines plane. A miximum of seventy reservations will be accepted.

New members include: Linden B. Bissell of Yakima; Donald F. Burr of Tacoma; Alfred H. Croonquist, L. Jane Hastings and Roderick G. Parr of Seattle, all former Junior Associates; James W. Ellison, Seattle; William E. Paddock, Yakima; Alfons V. Peterson, Seattle; Donald S. Wallace, Seattle; Jesse T. Wilkins, Jr., and C. Noel Wortman, Seattle.

NORTHERN CALIFORNIA CHAPTER

Donald Foley, Lecturer of the Department of City and Regional Planning, University of California, was a recent speaker at a Chapter meeting.

SOUTHERN CALIFORNIA CHAPTER

E. F. Sekler, Vienna architect and Professor of Architecture, was the principal speaker at the May meeting held in the Town and Gown, University of Southern California, Los Angeles.

His subject was "Beliefs Behind Architecture" and numerous interesting slides were shown to emphasize the speaker's viewpoint.

The meeting also observed the annual meeting with the USC Student Chapter, and an exhibit of student work was shown.

ENGINEERS

(From Page 29)

California State Engineers examinations given last November. Among those qualified to practice and granted California licenses were:

Milton A. Abel, Studio City; John D. B. Allison, Jr., Monterey Park; Norval W. Beattie, Arthur J. Bunas, and William D. Rumberger, Sacramento; Robert J. Bentson, Montebello; Robert L. Culp and Norman B. Jone, Whittier; Lawrence H. Daniels, Redding; Harold S. Dewdney, Stephen E. Johnston, Stanley H. Mendes, and William C. Taylor, Pasadena; Morris Doberne, North Hollywood; Arthur A. H. Ezra and Nathan Karp, Berkeley.

John B. Ferguson, Van Nuys; Abe Goodman, San Rafael; Albert O. Grote, Rivera; Stanley I. Hart, Robert W. Haussler, Takeyuki Katow, Alfred Scherner, George H. Tong, Jack E. Zehnder and Morris Zuckerman, Los Angeles; Walter H. Hensolt, Menlo Park; John J. Holstein, Alhambra; Thomas E. Kinney, Jr., San Francisco; Kirk C. McFarland, Los Altos; Arthur W. Miner, San Mateo; Svend H. Nielsen, Rivera; George R. Saunders, San Diego; John M. Steinbrugge, Long Beach; and Frank Wormald, Mountain View.

COL. CARL Y. FARRELL, C.E.

(From page 23)

tive duty following college years at the Colorado School of Mines.

In 1935 he was assigned to the Ocala District, Corps of Engineers, for duty on the Florida Ship Canal, and in 1937 was transferred to Vancouver Barracks, Wash., for 3 years, thence to Washington, D. C. From 1941 to 1943 he was in charge of all military construction in the vicinity of Alexandria, La. In 1943 he was named commanding officer of the 594th Engineer Boat and Shore Regiment in Florida, and went overseas as Lt. Col., AUS, with that unit in May 1944, being promoted to Col., AUS, in 1945. He was commanding officer of the 4th Engineer Special Brigade until its inactivation, and then of the 5th Engineer Construction Group in Japan for two years following V-J Day.

Returning to the U. S. in 1947, he was Post Engineer for 4 years at Fort Belvoir, Va. In 1947 he was commissioned as a Captain in the Regular Army.

In World War II, Col. Farrell saw duty in New Guinea, New Britain, the Admiralty Islands, Morati Island, and the Philippines. He received the Legion of Merit for "opening the port of Manila" and for "unloading the first ship to arrive."

Twice he received the Bronze Star Medal: in February 1945 for "meritorious achievement" at San Fabian, Luzon, P. I., and in October 1945 for "port operation missions highly essential to support occupational forces" by Engineer Boat and Shore operations in the invasion of the home islands of Japan and after the surrender of Japan.

Col. Farrell received special commendation in January 1946 for "courageous leadership in combat . . . loyalty, efficiency and devotion to duty recognized only partially by commendations and decorations awarded."

PERSONALITIES

HARRY P. EVANS, Metallurgist
Boeing Airplane Company
Seattle, Washington

One of the outstanding personalities in the metals field is Harry P. Evans, Metallurgist of the Boeing Airplane Company's Seattle, Washington, division, who was born in Edgerton, Kansas, where he lived on a farm as a boy.

HARRY P. EVANS
Metallurgist

He received his pre-college education in the Edgerton public schools; received his B.S. and M.S. in Chemistry and Metallurgy at the University of Kansas, and in 1925 received his Ph.D. in Physical Metallurgy at Iowa State College.

Dr. Evans then held positions as Chief Metallurgist for several companies, mostly in the Chicago area. Among these were the Pettibone Mulliken Company, Hubbard Steel Foundry, Ingersoll Steel and Disc Company and the Calumet Steel Company.

In 1939, Dr. Evans decided to seek his fortune in the Puget Sound country in Washington. He has been employed by the Boeing Airplane Company as Metallurgist since 1940.

Harry P. Evans has been very active with the American Society for Metals for many years. He is a past chairman of the Puget Sound Chapter. He has also been active with other technical societies such as Past Chairman, A-1 Committee of A.S.T.M., and Past President of the Chicago Foundrymen's Club, A.F.A. He is also an active member of the Rainier Golf and Country Club, and resides with his wife in the City of Seattle.

NEXT MONTH: William T. Wright, Structural Engineer, Los Angeles.

ARCHITECTS COMMISSIONED FOR THAILAND PROJECT

The firm of Daniel, Mann, Johnson & Mendenhall, architects and engineers of Los Angeles, has been appointed by Thai Wealth, Inc. of Thailand, Siam, to provide designs and act as consultants for a proposed new structure for the Tahi Weath Corpn, to be built in Bangkok.

Work consists of developing a compound for the main offices of the Corpn. near the Chao Praya River. The compound is composed of about two and one half acres adjacent to the canal as well as a main arterial running from the metropolitan city area of Bangkok up to the Bangkok port area.

The designs and site utilization layouts will be made in the Los Angeles offices of the architects with the working drawings for construction prepared by an associate Siamese architect in Bangkok.

The Thai Weath Corpn is engaged in the import, export and agricultural business and serves as an advisor to the Thai government in the development of the country's natural resources.

ARCHITECTURAL FIRM EXPANDS

The architectural firm of Meyer & Evers, A.I.A., San Francisco, recently announced the appointment of George Frederic Ashley, A.I.A., Lawrence H. Keyser and Chris W. Runge, architects, as partners in the firm.

Frederick H. Meyer and Albert J. Evers, senior partners, are well known nationally in the field of architecture and design.

GLADDING, McBEAN STAFF CHANGES

New appointments in the sales and administrative staff of Gladding, McBean & Company were recently announced by James W. Mahoney, executive vice president of the clay products firm.

Harold L. Kolberg will serve as General Administrative Assistant to Paul J. Lovewell, vice president and general manager, Northern California Area; Lloyd

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Paulsen appointed Southern California Area manager of refractories products division; George Lindahl named sales manager, Northern California Area refractories products division. Both divisions are under the direction of Joseph R. Rhodes, vice president and general sales manager, refractories division.

Albert E. Barnes, manager, Architectural Products Promotion, has been transferred to the Bay Area; Thomas P. Reid named manager with same duties for Los Angeles area. Raymond H. Brown, general sales manager of the Architectural Products Division, will continue in that capacity, with Barnes working strictly in the field of promotion.

NEWS & COMMENT ON ART

(From page 6)

offering, at the Museum, Views of Venice — Four Centuries in Prints; The Passion According to St. John, Prints by Charles Bouleau; and The Four Seasons of the Garden. The Loan Exhibition at the San Francisco Public Library is "Man's Architectural Homage to his God."

SPECIAL EVENTS—Painting classes for children (Saturday mornings); Motion Picture Series (Saturdays at 2:30 p.m.); and Organ Program (each Saturday and Sunday) at 3:00 p.m.

CITY OF PARIS

The Rotunda Gallery of The City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, Curator, is offering The Thirteenth Annual Pacific Coast Ceramic Exhibition and Sale, starting May 20 and continuing through June 15.

Each item has been carefully selected and awarded by a jury.

The Pictures of the Month present a group of Lithographs by Utrillo, Vlaminck and Chagall.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has arranged the following schedule of special exhibitions and events for the current month:

EXHIBITONS—Raoul Dufy Memorial Exhibition (an extensive group of paintings and watercolors); Art of the Bay Region; French Painting at Mid-Century, an American Federation of Arts Exhibition; Smith College Collects; continuation of the Four Artist-Craftsmen; and Light and Color for Living Tomorrow.

SPECIAL EVENTS—Include Composers' Forum, Singers Guild and Griller Quartet; Lecture Tours each Sunday at 3:00 p.m.; Art Discussions each Wednesday evening at 8:00 o'clock; "Art in Cinema," film series; and Classes for the Layman, children and the Sketch Club.

PARKMERCED BRANCH—A special exhibition of Selections from the Parkmerced Painting Classes, and Children's and Adult Painting classes.

BANK OF REPUBLIC GOLD EXHIBIT AT deYOUNG

Eighty masterpieces from one of the largest and finest collections of pre-Hispanic goldwork, a portion of the Gold Museum of the Bank of the Republic, Bogota, Columbia, will go on display at the M. H. deYoung Memorial Museum, San Francisco, this month and continue through June.

Created by skilled indian artisans between the beginning of the Christian era and the Spanish Conquest of South America in the early 16th Century, the goldwork includes examples of virtually every technique known to modern goldsmiths.

The exhibit was transported to the U. S. on the Battleship New Jersey, and this is the only exhibition which will be made on the West Coast.

FRANCOIS BOUCHER PAINTINGS ADDED TO OAKS COLLECTION

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, announces the addition of two important paintings by the 18th Century French master Francois Boucher, to the Roscoe and Margaret Oaks Collection.

The paintings are "Diana and Callisto" and "Bacchantes."

ST. MARY'S SQUARE GARAGE

(From page 17)

very important factor since it governed not only the framing system but also the parking and traffic pattern within the garage. In the north-south direction columns were spaced 33 feet, 6 inches, o.c., thereby allowing four cars to be parked between columns rather than three cars, as is found in most garages.

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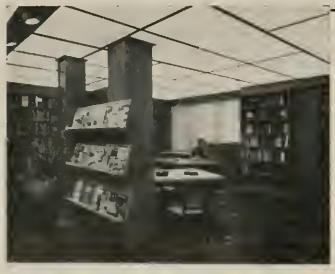
This spacing reduced the total number of columns in the structure and allowed a greater number of cars to be parked in the same area. To save additional space the columns were made rectangular shape with rounded ends, 18 inches by 54 inches instead of using a round column which would have had to be 32 inches. For economy in reuse of forms, this same size was used throughout (see top illustration, page 17), except for a few columns on the fourth floor. The concrete columns are reinforced with three cores of steel, some of them tied and some using spirals, and concrete specifications called for 5000 p.s.i. The column spacing in the east-west direction is for the most part 31 feet by 6 inches.

The floor framing (See illustration bottom page 14) decided upon was concrete joists spanning 31 feet by 6 inches between girders which in turn span 33 feet by 6 inches over the columns. The joist construction was used because of economies in form work, their relatively light weight, and their stiffness. The joists and girders (See illustration top of page 14) are the equivalent, in weight and amount of concrete, to an 8.7 inch flat slab. The joists provide the stiffness of a 13 inch slab. The joists on this job (See illustration top page 15) are especially interesting because of the type of pan used. The pans were made in one length between the girder and the row of bridging in the center of the span, a distance of 13 feet, 1 inch, and the soffit of the joists was formed by the pan itself with horizontal flanges of adjacent pans being clamped together. In this way, the usual wood soffit was eliminated and in addition, no shores were required under the joists. The pans themselves span 13 feet, 1 inch, and the only shoring required is under the girders and bridging. The framing was arranged to make possible a maximum reuse of these pans on all floors. This system effected a considerable saving in shoring and form work.

JOISTS-GIRDERS

The joists are 5½ inches wide by 18½ inches deep, using a 15 inch stem and a 3½ inch slab. Most of the pans are 30 inches wide.



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The typical girder is 54 inches wide by 23 inches deep. This shape girder was chosen to reduce the floor-to-floor heights resulting in a saving in excavation and total wall height. In addition, wide girders provide an effective haunch at the ends of the joists, thereby increasing their stiffness. Again the same size girder was used throughout the project.

ROOF DESIGN

The design of the roof was a special problem for it had to support the new park of St. Mary's Square. In general, the planting areas of the park are provided with 20 inches of topsoil and 4 inches of rock for drainage. The structural slab was protected with a membrane which in turn was protected with a covering of 3 inches of concrete. This along with 100 lb/ft 2LL, gives a superimposed load of 380 lbs/ft2 on the roof framing. By comparison, the superimposed load on the floor system is 75 lb/ft2.

The area has been redesigned and beautified with ample walkways and lawns and an abundance of shrubs and trees. In addition to the park surface, trees and flowers will be located in planting boxes adjacent to the sidewalks along California and Pine streets. To complete the beauty and interest of the park, the famous marble and stainless steel statue of Dr. Sun Yat Sen will be replaced in its old location in front of the existing poplar trees.

ARCHITECTURAL CONTEST

(From page 22)

schools of architecture at each of the three campuses should select an interne to spend next summer at Berkeley consulting with doctors, time and motion study experts, architects, and cardiac patients themselves to find out the various requirements which must be met for homes and offices which can be lived and worked in by people with heart trouble without danger to their health. On the basis of information developed, a nationwide prize design contest, open to all architecture students in the United States, will probably be carried on. The result of the two contests, Dr. Gordon Lamb, representing the Heart Association's Cardiac in the Home Committe, said, will be "A better house for heart patients which will be a better house for everybody."

Representatives at the meeting were: Alameda County Heart Association President-Elect Dr. Lovell Langstroth, Jr. and Dr. Gordon Lamb; East Bay Chapter of the A.I.A., Donald Hardison, Richmond; President Russell G. deLappe of Oakland and Charles Jean Goebel, Orinda, of the Institute's Heart Committee; Women's Architectural League, Mrs. Winfield Hyde and Mrs. Al Fingado of Berkeley; University of California College of Architecture, Professor John G. Rauma and Frank Krueger; Stanford University College of Architecture, Arnold Fluckiger; University of Southern California College of Architecture, Fereydoon Ghaffari.

CALIFORNIA BRICKLAYER APPRENTICE WINS AWARD

Robert Ohran of San Jose won first prize of $500 in the annual national Apprentice Brickmason Competition over a field of thirty contestants representing fourteen states and the District of Columbia. James Jameson of Los Angeles placed second and won $300.

More than a half-million people viewed the 6th annual show held this year in Los Angeles, and the bricklayer contest is an annual feature of the show being sponsored by the Bricklayers, Masons and Plasterers International Union with the cooperation of the Structural Clay Products Institute.

Only apprentices with less than two years in the trade are eligible to compete. Judging is done on the basis of workmanship, accuracy, and handling of the tools—not on speed.

FRANK LLOYD WRIGHT EXHIBIT

The Frank Lloyd Wright Exhibit, scheduled to be shown at Barnsdall Park in Los Angeles, has been postponed and will open the latter part of May and continue through June. The exhibit will open at 12 noon, daily except Monday.

PIGS-KIN LEATHER APPOINTS DEALERS

Edgar K. Orr, president of the Edgar S. Kiefer Tanneries Company, Grand Rapids, Michigan, recently announced the appointment of the firm of Arthur H. Lee & Sons Company of Los Angeles as the official distributors for PIGS-KIN leather tiles for Los Angeles and Orange counties.

EVERETT BROWN, A.I.D.
Design Consultant

Additional distributors announced by Orr included the Welch-Erwin Corpn, Albuquerque, New Mexico; the Hill Corpn, San Francisco; Laing-Garrett Const. Spec., Inc., Phoenix and Tucson, Arizona; Alder's Co., Salt Lake City; Andrew N. Baird Building Specialties, San Diego; George L. Davis Co., Seattle, and the Berger Bros. Corpn, Portland, Oregon.

This unique leather floor and wall product is obtained from the toughest portion of pig's skin, and has been styled by Everett Brown, A.I.D., nationally known design consultant, for a wide variety of construction uses.

POMONA TILE FACTORY CHANGES MANAGEMENT

J. N. Batchelor, Pomona Tile's Arkansas City factory manager, was recently appointed head of all tile sales and distribution for Pomona in the Midwest with headquarters in Kansas City.

D. R. Speaker of Pomona, California, becomes the new factory manager.

WILHELM ADRIAN, 1886-1954

Structural Engineer

Wilhelm Adrian, 68, San Francisco structural engineer, died at his home in San Leandro early in May following a brief illness.

Adrian was a partner in the firm of Adrian, Graham and Hayes, engineers, San Francisco, and a past president of the Structural Engineers Association of Northern California. A native of Germany, he was active in many civic groups.

TECHNICAL PROGRAM FEATURING COMMERCIAL LIGHTING

Theatrical lighting can be adapted to numerous dramatic applications in churches, public buildings, homes, gardens or merchandising displays, 550 spectators were told at an unusual demonstration in San Francisco recently.

The event was a demonstration of theater lighting sponsored jointly by the Northern California Section and San Jose Chapter of the Illuminating Engineering Society and attended by architects,

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consulting engineers, decorators and others as guests. The demonstration was presented in the theater of the Marines Memorial Club by Arch Monson, head of the Kliegl Lighting Company of California and C. J. Holzmueller Company, and Robert Graham, illuminating engineer formerly with the production department of NBC. Monson had charge of the lighting of all pageants and other events in California's three-year Statehood centennial celebration 1948-1950.

Lighting should be considered an art form to be integrated with color, line, texture and other elements of the object or area being illuminated, Graham said. He showed those unfamiliar with theater lighting how a stage is divided into six areas to be lighted bi-dimensionally. With a model he demonstrated how light is used to depict special relationships and said the trend in theater lighting is toward triangular or tri-dimensional lighting by means of a third lamp for each area of the stage, mounted above and behind. Any theater or auditorium with stage should have a minimum of 40 circuits for sufficient lighting flexibility to obtain standard dramatic effects, he said.

A great amount of equipment was especially assembled for the evening and those present were given opportunity to inspect it.

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Forms close 20th of month preceding date of publication.

ARCHITECT & ENGINEER
MAGAZINE

68 Post Street San Francisco

ARCHITECTS FORM FIRM

Formation of a new architectural firm comprising architects Edward Sullam, Miles Peris and James B. Stewart has been announced.

The new firm with offices at 257 S. Spring Street, Los Angeles, will concentrate their activities in the San Gabriel Valley.

CALIFORNIA ASSOCIATIONS FORM NEW CONTRACTORS ORGANIZATION

Affiliation of the Building Contractors Association of California with other construction industry association in the State in the Home Builders Council of California, has been announced by L. U. Jones, president of the Building Contractors Association.

Six northern California associations and two from southern California now form the Council. Unification of the industry has long been a major goal and formation of the new group is one of the most important achievements in the industry since World War II, Jones said.

President of the Council for 1954 is K. Sande Senness, former president of the Home Builders Institute of Los Angeles. Council members include Associated Home Builders of San Francisco, Associated Home Builders of Greater East Bay, Peninsula General Contractors and Builders Association, Marin Builders Association, General Contractors Association of Contra Costa County, Home Builders Institute of Los Angeles, Associated Home Builders of Sacramento, Home Builders Association of Fresno and the Building Contractors Association of California.

DILLON TILE APPOINTS ANOTHER DISTRIBUTOR

Tom Dillon, president of the Dillon Tile Supply Company with general offices in San Francisco, recently announced the appointment of the Sierra Specialty Company of Los Angeles as Southern California distributor of the Dillon Safety Bar, a newly developed product in the building materials industry.

Complete stock of the Dillon Safety Bar will be carried in Los Angeles.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

NUCLEAR PHYSICS. By W. Heisenberg. Philosophical Library, Inc., 15 East 40th Street, New York 18. Price $4.75.

The author begins his book with a short and interesting history of the views about atoms in antiquity and also of the development of atomic theory till the close of the 19th century. The next chapter is devoted to molecules and atoms, dealing with Bohr's theory, the periodic system and the extra-nuclear structure of atoms.

The main subject includes radioactivity, the binding energy of nuclei, nuclear structure, artificially induced nuclear transmutations and with the methods of observation and of producing nuclear transmutations.

The author, W. Heisenberg, is Director of the Max Planck Institute of Physics, Gottingen, and has managed to convey a great deal in simple language and without mathematics. There are some fifty-two illustrations.

WHAT YOU SHOULD KNOW ABOUT PAINT. By E. M. Fisher. National Painters Magazine, 30 Church St., New York 7. Price $2.50.

The author has prepared this book to fill a specific need and covers the progress made in the paint industry during the past twenty years; new paint products; new synthetic materials; improved pigments and other technical progress is covered in such a manner that non-technical people engaged in the distribution, sale, and use of modern paints can understand.

The book is also designed to be useful to those engaged in other industries allied to the paint industry, and as a refresher course for paint chemists specializing in certain phases of the paint industry but not up-to-date on the wide panorama of trade sales developments. For those who buy paint, it is hoped the book will assist them in making more intelligent purchases.

MIDWEST DIRECTORY OF BUILDING OFFICIALS AND INSPECTORS. The Conference, 207 Holliday Bldg., Indianapolis, Ind. Price $10.00

Comprehensive directory of public officials of the Midwest states who administer and enforce codes and regulations governing building construction; also lists types of codes under which the governmental agency regulates building, plumbing, electrical, heating and related subjects.

Includes listings in the states of Ohio, Michigan, Indiana, Kentucky, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, North Dakota and South Dakota.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

How to obtain the right washer. A 16-page booklet has just been published giving helpful information and pictures on the manufacture and availability of metal and fiber washers, both standard and special; useful data on general washer characteristics, tolerances, and facilities for meeting individual requirements. Free copy write DEPT-A&E, H. K. Metal Craft Mfg Co, 3775 10th Ave, New York 34.

Temperature regulators. A 4-page bulletin describes design and operation features of temperature regulators featuring a pilot, pressure and thermal element, which changes steam pressure for delivery according to demand requirements. Large cutaway diagram of typical regulator with description of construction and parts; recommended installations for instantaneous water heaters, storage water heaters and forced air heating systems are shown in 3-line drawings. Write DEPT-A&E, Spence Engineering Co, Inc, Walden, New York.

Wrought iron furniture. Newest catalog on wrought iron furniture; 40-page booklet features designs of Maurizio Tempestini of Italy in varied settings, together with fabric swatches and color range available in metal. Free by writing DEPT-A&E, Harold J. Siesel Co, 216 E. 49th St, New York 17.

Steel sliding closet doors. Designed for residential use, low cost steel sliding closet doors are described in new bulletin; basic unit 6'8" high in widths of 3', 4', 5' and 6'; also same

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CATALOGS — Continued

widths available in 8′ floor to ceiling height, with or without top storage doors; available in top hung or floor track model, has "snap-in" features throughout eliminating nuts and bolts. Variety of colors and types; completely packaged in kit with simplified instructions for installation. Write for copy of bulletin DEPT-A&E, The Steelcraft Mfg Co, 9017 Blue Ash Road, Rossmoyne, Ohio.

Adhesive products for clay tile. A new brochure (A.I.A-23P) just released describes in detail use of adhesive products for thin set genuine clay tile, makes possible use of genuine clay tile, rather than substitutes. Photographs of installations, specifications, materials, installation procedure, and results; charts and suggestions on uses. For free copy write DEPT-A&E, Hobart Bros, 200 Davis St, San Francisco 11.

Hardboard. New bulletin printed in color and containing many photos, gives complete information on "All-wood-hardboard," its physical properties, resistance to chemicals, and diversity of uses in the construction of all types of buildings and homes; also use in combination with other building materials. For free copy write DEPT-A&E, Oregon Lumber Co, Hardboard Division, Dee, Oregon.

Swimming pool design trends. Anyone interested in swimming pools should obtain a copy of the 20-page booklet entitled "Trends in Swimming Pool Design," representing experiences of America's top designers. This booklet will prove especially helpful to engineers, architects and those contemplating pool construction or modernization; represents latest thinking with regard to basic planning, pool shapes, lounging areas, wading pools, and bath houses; gives data on various types of construction, modern trends in lighting, color in the pool, data on filtering, recirculation and chlorinating systems, and newest developments in pool fittings and accessories. Copy free by writing DEPT-A&E, Elgin-Refinite, Swimming Pool Department, Elgin, Ill.

Rolling gymstands. New catalog, R-54 (A.I.A. File 35-F-11), printed in two colors and profusely illustrated, this 16-page booklet describes in detail economies in indoor seating, types and sizes available, factors in selecting, operation, visibility, accessories available, planning aids, typical gymnasium floor plans and specifications; of particular interest to school superintendents and school officials now planning installation of gymnasium seating in either new or existing construction. Free copies may be had by writing DEPT-A&E, Wayne Iron Works, Wayne, Pa.

Planned lighting. New bulletin gives the story of planned lighting; indicates the recommended illuminating levels of all types of interior installations, explains the differences between fluorescent and incandescent light sources and outlines the procedure for selecting the proper light source, as well as the proper equipment for each particular job; also covers the services offered to lighting equipment users and specifiers, together with an outline of the designing and production procedures followed in the company plant to manufacture silvered-mirrored reflectors and other equipment. For free copy write DEPT-A&E, Pittsburgh Reflector Co, Oliver Bldg, Pittsburgh 22, Pa.

Pressure treated Douglas fir. A simplified guidance for users and specifiers of pressure treated Douglas fir and other west coast woods; available chemical treatments applied to wood by vacuum pressure methods to protect against rot, insects, fire and marine borers, together with recommended retentions of preservatives for safeguarding wood when exposed to various hazards. Free copy available by writing DEPT-A&E, Western Wood Preserving Operators' Assn, 370 Pittock Block, Portland 5, Oregon.

Better laboratory planning. Revised edition of "Better Laboratory Planning," based upon many helpful comments from users of the original bulletin on laboratory equipment, is now available; includes many new and attractive pictures of laboratories ranging from industrial, college and hospital lab layouts to secondary school and research and development laboratories; helpful section entitled "Recommended Bidding Practices"—of service to industrial, community, educational and hospital building planners—answering many questions on the subject of bidding. Copies available by writing DEPT-A&E, Laboratory Equipment Section, Scientific Apparatus Makers Assn, 20 Wacker Drive, Chicago 6, Ill.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30
F.O.B. Plant	

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$12.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.44	$2.90
Top Sand	2.38	3.13
Concrete Mix	2.38	3.06
Crushed Rock, ¼" to ¾"	2.38	2.90
Crushed Rock, ¾" to 1½"	2.38	2.90
Roofing Gravel	2.81	2.90
River Sand	2.50	3.00
Sand—		
Lapis (Nos. 2 & 4)	3.56	3.94
Olympia (Nos. 1 & 2)	3.56	3.88
Cement—		
Common (all brands, paper sacks), Per Sack, small quantity (paper)		$1.05
Carload lots, in bulk, per bbl.)		3.55

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount 2% on L.C.L.

Trinity White, Medusa White, Calaveras White: 1 to 100 sacks, $3.50 sack warehouse or del.; $9.56 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 4-yd. loads:

Per cubic yard, 1-8 Mix	$ 9.80
1-7 Mix	10.15
1-6 Mix	10.70
1-5 Mix	11.40
Curing Compound, clear, drums, per gal.	1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each		.62

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	⅝x2¼	½x2	⅜x2	¼x2
	$	$	$	$
Clear Otd., White	$425	$405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
⅝ x 2¼	390.00	381.00
⅝ x 2¾	375.00	355.00
⅝ x 3¼	395.00	375.00
⅝ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

⅝ x 2¼ First Grade	$390.00
⅝ x 2¼ 2nd Grade	365.00
⅝ x 2¼ 2nd & 3tr. Grade	375.00
⅝ x 2¼ 3rd Grade	240.00
⅝ x 3¼ 3rd & 3tr. Jtd. EM	380.00
⅝ x 3½ 2nd & 3tr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $ 15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft.... .....$64.00
(2") Over 1,000 □ ft..... 59.00
Cotton Insulation—Full-thickness
(3⅜") .....$95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides.....$23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m.....$100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m..... 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry	185.00
8 to 24 ft.	

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 219.00
¾-inch, per M sq. ft..... 292.00
Plyscord .....11½c per ft.
Plyform .....25c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square.....$15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated .....Add $3S per M fo above
Creosoted, 8-lb. treatment .....Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds.....$43.50
Standard Ribbed, ditto.....$47.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work .....per yard 85c
Three-coat work .....per yard $1.10
Cold water painting.....per yard 25c
Whitewashing .....per yard 15c

Linseed Oil, Strictly Pure

(Basis 7¾ lbs. per gal.)		Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine

(Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (5oft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.80	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch .....$2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply.....$13.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square.....$18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square..... 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square..... 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top.....$99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. .....$ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M.....$240.00
Standard, 8-in. per M..... 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft.....$1.25
Vented hip skylights, per sq. ft..... 2.25
Aluminum, puttyless,
(unglazed), per sq. ft..... 1.25
(installed and glazed), per sq. ft... 1.85

STEEL—STRUCTURAL—

$290 per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10
1 ton to 5 tons, deduct 25c.	

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.20 to $1.60 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" bese @ $1.35 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $1.65 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜".....$ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft..... $ .65
Rubber tile, per □ ft.....$ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot

	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST B-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINOLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: NIles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
frusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 333 Montgomery St., DO 2-3883
Los Angeles 13: 601 West Fifth St., MI 6294

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT & HILP
San Francisco: 918 Harrison St., DO 2-0700
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BEITANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES
(ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

SWIMMING POOL, High School, Visalia, Tulare county. Visalia Union High School District, Visalia, owner. Reinforced concrete construction — $45,400. ARCHITECT: Robert Kaestner, Visalia. GENERAL CONTRACTOR: Consolidated Const Co, Fresno.

WAREHOUSE BLDG, Merced. Felice & Perkins, Richmond, owner. 1-story reinforced concrete tilt-up construction; 40,000 sq. ft. floor area—$95,330. ENGINEER: Mac D. Perkins, San Francisco. GENERAL CONTRACTOR: Johnson & Mape Const Co, Menlo Park.

BANK & STORE, Chico, Butte county. Bank of America, San Francisco, owner. 1-story, with basement and mezzanine, reinforced concrete, structural steel roof trusses, brick veneer front and 1 side; casson and conventional foundations, $247,313. ARCHITECT Capital Co., San Francisco. GENERAL CONTRACTOR: Ralph Larsen & Son, San Francisco.

VARIETY CLUB NURSERY, Las Vegas, Nevada. Variety Club, Las Vegas, owner. Contract awarded at $61,883. ARCHITECT: Vernon Welborn, Las Vegas. GENERAL CONTRACTOR: J. A. Tiberti Construction Co., Las Vegas.

RECREATION BLDG., Huntington Park, Los Angeles county. City of Huntington Park, owner. 1-story, frame and stucco recreation building, 25,000 sq. ft. floor space, gravel roofing, concrete slab and asphalt tile floors, maple floor gymnasium, acoustical tile ceiling, interior painting, gymnasium equipment, kitchen, fountain, clubroom, social room, fine arts room, gas fired hot water heating, $267,590. ARCHITECT: Hugh R. Davies, Long Beach. GENERAL CONTRACTOR: O. L. Dahl, Long Beach.

ELEMENTARY SCHOOL, Mt. Shasta, Siskiyou county. Mt. Shasta Union Elementary School District, Mt. Shasta, owner. Frame and brick veneer construction, electrical baseboard heating; 5 classrooms, administration unit, nurses room, toilet rooms, $108,866. ARCHITECT: Howard R. Perrin, Klamath Falls, Oregon. GENERAL CONTRACTOR: A. G. Silva, Klamath Falls, Oregon.

BANK BLDG, San Diego. Bank of America, Los Angeles, owner. 1-story, full basement, reinforced concrete and tilt-up 5-points bank building: 63x150 ft.; composition roofing, tapered fabricated steel beams, concrete and terrazza flooring, brick

facing, acoustical tile, heating and ventilating, ceramic tile, painting, plastering, plumbing, electrical work, aluminum and plate glass front — $154,100. ARCHITECT: Capitol Co, Los Angeles. GENERAL CONTRACTOR: F. E. Young Const Co. San Diego.

RED CROSS BLDG., Burbank, Los Angeles county. Burbank Chapter Red Cross, owner. Frame and stucco office building; 3400 sq. ft. of space, composition rock roofing, concrete slab with asphalt tile floor, steel sash, forced-air heating; executive offices, auditorium, $40,000. ARCHITECT: J. B. Jordan, Burbank. GENERAL CONTRACTOR: Arthur K. Ehrlich, Burbank.

ART MUSEUM REMODEL, deYoung Museum, San Francisco. City and County of San Francisco, owner. Remodel and make alterations to the M. H. deYoung Memorial Museum in Golden Gate Park, $229,130. ARCHITECT: Weihe, Frick & Kruse, San Francisco. GENERAL CONTRACTOR: S. J. Amorso Const. Co., San Francisco.

OPERATIONS BLDG and Control Tower, Holloman Air Development Center, Alamogordo, New Mexico. Albuquerque District Corps of Engineers, U. S. Army, Albuquerque, New Mexico, owners. 1 2-story operations building of masonry construction, 10,000 sq. ft. floor area, steel frame, cement asbestos tower 74 ft. high; and outside utilities, water, gas, sewer, electrical — $132,273. GENERAL CONTRACTOR: Gilchrist & Cole, Las Cruces, New Mexico.

SEWAGE DISPOSAL PLANT, Daly City, San Mateo county. North San Mateo County Sanitation District, Daly City, owner. Reinforced concrete construction — $424,676. ENGINEER: Harry N. Jenks, Palo Alto. GENERAL CONTRACTOR: C. Norman Peterson, Berkeley.

DRY CLEANING PLANT, Los Angeles. Pollyanna Bakery, Los Angeles, owner. 1-story frame and stucco, 24x40 ft. building; composition roofing, plate glass, concrete

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.35	3.00	3.00	3.00	3.00	3.00
REINF. STREET	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.30	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

* 6 Hour Day. ** 7 Hour Day. *** Before C.I.S.C for 15c increase.

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slab floor, plumbing and electrical work. ARCHITECT: Arthur W. Angel, Montebello. GENERAL CONTRACTOR: Phil D. Baker, Los Angeles.

PARCEL POST ANNEX, Berkeley. Frank Spenger, Berkeley, owner. 1-story reinforced concrete tilt-up construction building for U. S. Post Office Department, 10,000 sq. ft. area and 4,000 sq. ft. loading dock — $84,718. ARCHITECT: Skidmore & Walling, Berkeley. GENERAL CONTRACTOR: Walter G. Payne Const Co, Berkeley.

TELEPHONE OFFICE, Warehouse and Carport, Colusa. California-Pacific Utilities Co., Colusa, owner. 1-story reinforced concrete and frame construction, combination telephone exchange building, warehouse and carport, $59,575. ARCHITECT: Peterson & Spackman, San Francisco. GENERAL CONTRACTOR: A. J. Hopper, Oakland.

CHURCH, Sunday School and Parish Hall, Mill Valley, Marin county. Church of Savior (Episcopal) Mill Valley, owner. 2-story concrete block and frame and stucco construction, $75,075. ARCHITECT: Arnold & Francis Constable, Sausalito. GENERAL CONTRACTOR: Fairchild Construction Co., Fairfax.

DRIVE-IN RESTAURANT and Cocktail Lounge, Oakland, Alameda county. Joseph Blumenfeld, San Francisco, owner. 2-story brick and structural steel construction with lots of plate glass, asphalt paving, $103,356. PLANS by Wm. B. David & Associates, San Francisco. GENERAL CONTRACTOR Salih Bros., San Francisco.

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APARTMENT BLDG., Los Angeles. Junior Realty Co., Los Angeles, owner. 2-story, composition roofing, oak and linoleum and rubber tile floors, interior plaster, individual gas water heaters, dual and single gas wall heaters, tile baths and stall showers, garbage disposal units, wrought iron railing, sliding wardrobe doors, steel casement and double hung sash, stone planter boxes; 8-family, 28 rooms, $1,196,000. ENGINEER: W. G. Chandler, Los Angeles. GENERAL CONTRACTOR: Max Selditz, Beverly Hills.

SEWAGE TREATMENT PLANT, San Rafael, Marin county. Terra Corpn, San Rafael, owner. Reinforced concrete construction to serve residential development north of city on Highway 101; material and paving furnished by owner—$250,000. GENERAL CONTRACTOR: Coast Pipe Line Constructors, Belmont.

COLD STORAGE BLDG., Modesto, Stanislaus county. Merchants Refrig. Co., Modesto, owner. 1-story reinforced concrete building; structural steel frame, cork insulation, refrigeration equipment; 203 x 190 ft. — $164,769. ARCHITECT: G. N. Hilburn, Modesto. GENERAL CONTRACTOR: Nomellini Const. Co., Stockton.

ELEMENTARY SCHOOL ADDN., Calistoga, Napa county. Calistoga Joint Unified School District, Calistoga, owner. Frame and stucco construction to remodel and strengthen high school building; concrete floors, asbestos shingle roof, asphalt tile floors — $313,323. ARCHITECT: Evans & Lincoln Assoc., San Jose. STRUCTURAL ENGINEER: Robert D. Dowell, San Francisco. GENERAL CONTRACTOR: Litchfield Const. Co., San Rafael.

OFFICE - STORE - WAREHOUSE, San Jose, Santa Clara county. W. P. Fuller Co., San Francisco, owner. 1-story reinforced concrete warehouse building; tilt-up concrete, wood roof trusses, some structural steel, plate glass front; warehouse 140 x 160 feet, office and store 80 x 70 feet—$155,800. ARCHITECT: Kress & Gibson, San Jose. GENERAL CONTRACTOR: Bayshore Const. Co., Berkeley.

BOWLING ALLEY, Lakewood, Los Angeles county. Panorama Bowl, Lakewood, owner. Composition roofing, arch rib trusses, steel girders, concrete, carpeted, asphalt tile and terrazzo floors, acoustic plaster work, acoustic tile ceilings, gas heating and air conditioning, paved parking area, stone and wood paneling, toilets and stall showers; built-in booths in restaurant, projecting steel sash, cast iron drains, sign tower, plate glass; 180 x 175 feet — $220,000. ENGINEER: John P. Jamieson, Los Angeles. GENERAL CONTRACTOR: Hanson Const. Co., Paramount.

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STEEL GRANDSTAND, Porterville, Tulare county. Porterville Union High School District, Porterville, owner. Erect steel grandstand at the High School athletic field—$51,435. ARCHITECT: R. C. Kaestner, Visalia. GENERAL CONTRACTOR: L. B. Pipes, Fresno.

CHURCH BLDGS., Bakersfield, Kern county. 1st Christian Church, Bakersfield, owner. To include Sanctuary to seat 760 persons; Chapel, administration unit, social hall, Sunday school; concrete and brick and glass exterior, steel sash, air conditioning; also frame and stucco, Roman ruffle brick — $510,726. ARCHITECT: E. L. McCoy, Bakersfield. GENERAL CONTRACTOR: L. H. Hansen & Sons, Fresno.

GRAIN STORAGE WAREHOUSE, Stockton, San Joaquin county. Port Stockton Grain Terminal, Inc., Port of Stockton, owner. Tilt-up concrete construction, sprinkler system. 150 x 600 feet area—$300,000. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

POLICE STATION, Hawthorne, Los Angeles county. City of Hawthorne, owner. Masonry, frame and stucco Police Station building; 6400 sq. ft. area, composition roofing, reinforcing and structural steel aluminum sash, metal doors, terrazzo and plastic floor covering; acoustic tile, heating and ventilating, cells, dark room, vault, toilets; interior plaster; drunk tanks, showers, car shelter; 1400 sq. ft. concrete block pistol range, asphalt paving — $119,045. ARCHITECT: Marion Varner, Pasadena. GENERAL CONTRACTOR: E. J. Neville Co., Inglewood.

MEMORIAL, Woodlake, Tulare county. County of Tulare, Visalia, owner. Reinforced brick and structural steel, steel windows, steel roof deck, porcelain enameled acoustical plaster, air conditioning system, 9,000 sq. ft. of area—$120,000. ARCHITECT: Lloyd J. Fletcher, Visalia. GENERAL CONTRACTOR: H. B. Thorp, Visalia.

POST OFFICE, Richmond, Contra Costa county. Jack E. Trott, Palm Springs, California, owner. 1-story concrete block bldg., wood roof; 27,000 sq. ft. floor space, 2,740 sq. ft. of loading dock—$200,000. ARCHITECT: Paul Hammarberg, Berkeley. GENERAL CONTRACTOR: R. E. Bartlett, Richmond.

COUNTY HOSPITAL, Red Bluff, Tehama county. County of Tehama, owner. 1-story reinforced concrete and frame construction; complete facilities for 20 beds and 2 cells. ARCHITECT: Albert W. Kahl, San Mateo. GENERAL CONTRACTOR: Liston Ehorn, Red Bluff.

RADIOLOGY BLDG., San Bernardino. Dr. Harold R. Morris, San Bernardino, owner. 1-story frame and stucco building with laboratories; gravel roofing, reinforced concrete part basement, slab and asphalt tile floors, interior plaster, acoustical ceilings, metal sash, field stone, brick

work, winter and summer air conditioning, lead X-Ray protection, toilet facilities, ceramic tile, metal toilet partitions, insulation, architectural glass, electrical intercom system, asphalt concrete paving; 3500 sq. ft. floor space — $55,460. ARCHITECT: Walter L. Culver, San Bernardino. GENERAL CONTRACTOR: Ted Rehwald, San Bernardino.

MARKET BLDG., Taft, Kern county. Bramwell Const. Co. (Safeway Stores) Los Angeles, owner. 1-story reinforced concrete and concrete block, wood roof and trusses, fiberboard ceilings, asphalt tile floors, thermal insulation; 20,267 sq. ft. floor area. ENGINEER: E. V. Mickles, Bakersfield. GENERAL CONTRACTOR: MacDonald, Young & Nelson, San Francisco.

IN THE NEWS

DOCTORS HOSPITAL

Architect Donald Francis Haines of San Carlos is preparing plans for the construction of a 100-bed hospital building to be built near Sunnyvale in Santa Clara county to be known as the Doctors General Hospital.

Estimated cost of the project is $1,000,000.

COUNTY LIBRARY

The architectural firm of Swartz & Hyberg of Fresno is preparing plans for the construction of a 2-story and basement County Library building for Fresno county.

The new building will be constructed in the Fresno Civic Center; will contain 76,360 sq. ft. of floor area, reinforced concrete, and will cost an estimated $1,550,000.

BANK ADDITION

Architect Ernest L. McCoy of Bakersfield is completing plans for the construction of an addition to the Anglo California National Bank building in Bakersfield.

The existing 66x86 ft. building will be remodeled, and an addition of the same size will be constructed.

TEN STORY BANK BLDG

The First National Bank of Phoenix, Arizona, will start immediate construction of their new 10-story bank and office building, which will be built at the corner of Central Avenue and Polk Street.

Base of the building will be 263x135 ft. in area.

Plans were prepared by architects William D. Reed of Dallas, Texas; Robert L. Rolfe, Dallas, is the structural engineer, and Zumwalt & Vinther of Dallas are the mechanical engineers.

Estimated cost of the building is $2,740,000.

LOW RENT HOUSING

The Housing Authority of San Francisco is proceeding with plans for immediate construction of the Hunters View Low Rent Housing Project, Evans Street and Middlepoint Road, comprising 350 units and costing an estimated $2,500,000.

The project includes 2-story row-houses of frame and stucco construction and some 3-story frame and stucco apartment buildings.

Donald Beach Kirby, A.I.A., San Francisco, is the architect.

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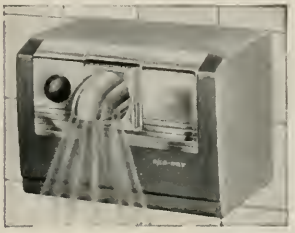
A new high speed, low cost, electric hand-and-face dryer with germicidal action; equipped with Odorout Sterilamp, indirect ultraviolet irradiation prevents spread of surface bacteria, checks skin irritation caused by water, alkaline or chemical solutions.



A 2000 watt heating unit, protected by a special fuse, and 6000 rpm blower assure under 30 second drying speed; convenient wall unit 9½" x 6¾"; the OZO-DRY is equipped with large push button timer and chrome plated nozzle of swivel design; available in grey metallic finish with chrome trim and completely rust proof; manufactured by Michael Electric Co., Inc., New Haven, Conn.

ARCHITECT SELECTED

J. Clarence Felciano, Santa Rosa, has been commissioned by the City of Petaluma to design a new Police Station, to be built in the City of Petaluma.

MANUFACTURING BUILDING

A 100 x 150 foot manufacturing building is being constructed in Burbank for the Jos. Koch Company, at an estimated cost of $67,000.

Plans were prepared by H. L. Standefer, consulting engineer, Studio City.

AIR POLLUTION CONTROL BUILDING

The City of Los Angeles will construct a building at Olympic Blvd. and Camulos

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Street, for use of the Air Pollution Control District at an estimated cost of $512,000.

The building is to be a type-III 2-story structure of approximately 30,000 sq. ft.: 9000 sq. ft. will be used for a chemical laboratory. A paved parking area of 15,000 sq. ft. will be provided adjacent to the building.

Louis S. Miller, Long Beach, is the architect.

ARCHITECT SELECTED

The Esparto Union Elementary School District, Esparto, has commissioned the architectural firm of Barovetto & Thomas of Sacramento to design and prepare specifications for the construction of a new elementary school building to be built in West Esparto.

Estimated cost is $198,000.

JACK STREBLOW HEADS NEW BASALT DIVISION

Jack Streblow has been appointed sales manager of the newly formed Structural Concrete Products Division of the Basalt Rock Company, Napa, according to an announcement by John R. Anderson, vice president.

The new division represents a merger of the Strestcrete Division and Precast Department.

Anderson also announced the appointment of Harold Price as manager in charge of sales, engineering, estimating, production, erection and licensing.

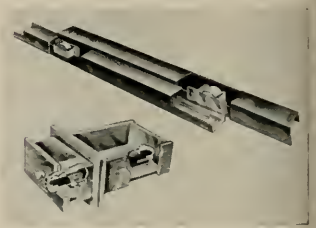
HIGH SCHOOL BONDS VOTED

Voters of the Bullard Unified School District of Fresno recently approved the issuance of $400,000 in school bonds for the purpose of building a new Junior High School, comprising 16 classrooms, administration room, library, home economics, commercial, music, shops, gymnasium, shower and lockers, and toilet rooms.

Construction will cost $750,000 and consist of concrete floors, frame and stucco, and asphalt tile floors. Alastair Simpson, Fresno, is the architect.

TWIN-SET CENTER DRAWER GUIDE

These new center drawer guides are specially designed for center guide construction and are the answer to every center drawer guide problem.



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WALTER T. BAKER APPOINTED

Walter T. Baker has been appointed Pacific Coast regional manager of major electrical appliances for Westinghouse with headquarters in San Francisco.

ARCHITECT SELECTED

The architectural firm of Young & Lloyd, Albany, has been commissioned by the Albany Unified School District to

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design and prepare specifications for the construction of a cafeteria addition to the Albany High School building.

GLENDALE COLLEGE GYMNASIUM STARTS

The architectural firm of George M. Lindsey and Robert M. Lindsey and Associates have started working on drawings for a reinforced concrete men's gymnasium building at Glendale College, Glendale. The new building will contain 32,894 sq. ft. and will cost approximately $500,000.

HOSPITAL SITE PURCHASED

The Mendocino Hospital Association of Ukiah has purchased a site in the newly developed Ukiah Village area and will soon construct a 40-bed hospital with complete facilities.

The new building will be 1-story, concrete block and frame construction and will cost approximately $350,000.

SCHOOL BONDS APPROVED

Recent special school bond elections approved by the voters include:

$2,000,000 for a new High School in Lancaster; $250,000 for a new Grammar School in Palmdale; $1,600,000 for new school facilities in Anaheim; and $1,900,000 for a new High School in Temple City.

BAKERSFIELD COLLEGE BUILDINGS STARTED

Working drawings are being completed in the office of architects Wright, Metcalf & Parsons, Bakersfield, for the new combined high school and junior college to be built by the Kern County Union High School and Junior College District on the southwest corner of Mt. Vernon and Panorama Drive in Bakersfield.

The new unit will comprise an administration building, academic, library, science engineering, business education buildings; a campus center; trades and industrial, agricultural and shop; theatre, music and arts building; and boys and girls dormitories. Structures will be of reinforced concrete construction with steel roof trusses and air conditioning.

Estimated cost is $6,150,000.

NEW REX CASCADE WATER HEATER

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U. S. VETERANS HOSPITAL SITE

The U. S. Veterans Administration general offices in Washington, D. C., recently announced acquisition of a site on the Stanford University campus in Palo Alto on which they will construct a $23,000,000 U. S. Veterans Neuropsychiatric Hospital containing 1000 beds and all necessary facilities.

The hospital was originally announced

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APPLICATION ENGINEER JOINS GERTH-PACIFIC

Don J. Reilly, formerly application engineer in the manufacturer's agency field, has joined the Gerth-Pacific Advertising Agency, San Francisco. Reilly, a graduate of both electrical engineering and business administration at the University of Minnesota, will serve technical accounts.

CECIL B. COULTER NAMED G-E FIELD REPRESENTATIVE

Cecil C. Coulter has been appointed field sales representative in the California-Arizona-Nevada area for the General Electric Company Air Conditioning Division.

With headquarters at 1052 W. 6th St., Los Angeles, Coulter will represent sales of packaged air conditioners and drinking water coolers. He previously served the company as field service engineer and sales representatitve in the G-E major appliance division.

SCHOOL BONDS ARE APPROVED

Voters of the South Pasadena Unified School District recently approved a proposal to issue and sell school bonds in the amount of $1,645,000 to finance school construction and repairs.

ARCHITECT APPOINTED

Michael Henderson, San Francisco architect, has been appointed senior planner for the San Francisco Redevelopment Agency, succeeding Harry Sanders who resigned recently.

DEPARTMENT STORE OFFICE BUILDING

The MacArthur Properties, Inc. of Oakland recently announced plans were under way for the construction of a 28-story combination office building and department store building, plus parking garages, on a site at Broadway, MacArthur Blvd. and Piedmont Avenue in Oakland.

R. H. Cooley, Oakland, is the Structural Engineer, and the John H. Moore Company of Oakland are the General Contractors.

SCHOOL BONDS APPROVED

Voters of the Claremont Unified School District, Claremont, recently approved a plan to issue $900,000 in school bonds to finance the construction of school facilities in the city over the next four years.

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ARCHITECT AND ENGINEER

RESIDENTIAL SWIMMING POOL . . . Los Altos, California

ARCHITECT: Harold Stoner

JUNE 1954

. EDITORIAL NOTES .

THE AMERICAN INSTITUTE OF ARCHITECTS

Among the increasing number of organizations which represent specific groups of professional people on a nationwide basis, and one which has made great progress in the past few years in welding into a practical plan many individuals and local associations for sound functioning of a constructive creed of ethics, is The American Institute of Architects.

Evidence of the progress being made by the Institute is the fact that at the 86th Annual Convention of The American Institute of Architects which was held mid-month in Boston, more than two thousand architects representing some one hundred and fifteen Chapters throughout the United States were in attendance. A number of distinguished architects from several "free" nations of the world, were also present and participated in official program and panel discussions.

Adopting the broad theme of "Forces That Shape Architecture", architects and Institute officers expanded the convention discussions beyond the immediate consideration of architecture and brought before those assembled many pertinent facts and considerations of educational, industrial, governmental and financial nature relating to the practice of architecture and the construction industry as a whole.

Whether any individual profits from the efforts of his "trade" association is largely a matter of one's choice as in most instances you take from cooperative endeavor in about the same ratio as you give, however, with a fundamental objective of professional advancement and a cooperative policy supported by outstanding leaders from all parts of the United States and many foreign countries, it is logical to assume that any architect, well established in practice, or fresh from college, could gain much by becoming a part of The American Institute of Architects.

* * *

Thirty-Seven Billion Dollars worth of U. S. Savings Bonds are now held by the public—much credit for their sale goes to MAGAZINE ADVERTISING, according to George M. Humphrey, Secretary of the Treasury.

* * *

SOUND BUSINESS SUGGESTION

The Marble Institute of America, an organization representing the producers and processors of marble in the United States, is currently urging architects, engineers, and contractors to have rough imported marble finished in this country and thereby avoid unnecessary, and frequently, costly delays in completing contracts.

The Institute's officials have disclosed that "reports continue to come in from various parts of the country showing that the anticipated difficulties in importing finished marble are actually being experienced, causing delays in completing contracts in a manner satisfactory to the architect and owner."

The time allowed, if progress schedules are to be maintained, between the taking of measurements at the building and the need for the finished materials at the site is usually too short to permit its fabrication and delivery from outside the United States.

Other reasons given for delays which can be corrected and controlled by a policy of "local finishing" include: differences in measurements are likely to occur, delay in securing replacements if necessary, and distance between site of the building and that of the fabrication of the material makes it difficult to translate conditions at the site to the requirements for fabrication.

It has been suggested that architects, and others responsible, include a clause in their marble specifications stating that all finishing, including selection and jointing to size, polishing, cutting and carving shall be executed in this country.

The project seems like a logical and worth-while effort, and if effected would lend itself to the saving of much time, effort and money, and would also make for better customer relations.

* * *

Slums cost a city much more than they contribute in tax revenues. A single major city paid out in fire, police, welfare and other services seven times more than revenues collected from its slum areas.

* * *

OUR THANKS TO ARCHITECT COULTER

Architect and Engineer,
68 Post Street,
San Francisco, Cal.

Gentlemen:

I wish to thank you for a very nice copy of the fine Architect & Engineer Magazine you publish. I consider it one of the best-gotten-up and useful magazines for both architects and engineers.

I have known it since the year 1905, when I began practice here in this city and note you began publishing it in that same year (49 years ago).

Owing to ill health I have not been practicing since 1947. However, I wish you continued success and a long continued careeer.

Most sincerely yours,

Norman R. Coulter.

Vol. 197 No. 3

EDWIN H. WILDER
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Contributing Editor

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Structural Engineering

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ERNEST McAVOY
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COVER PICTURE

TURQUOISE
SWIMMING POOL
AND GARDEN WALL

Los Altos, California

Residence of Wm. Zeppettini on Altamont Road, designed by Architect Harold Stoner, showing unusual use of decorative tile—6x6 Turquoise at water line of swimming pool; Garden wall is 150 ft. long, 16 in. to 7 ft. in height, buff color stucco with 300 Hermosa decorative sunburst tile at random; top of wall is 9x9 Murray English Red tile.

Landscape Architect: Wm. Louis Kapranos.

Tile Contractor: Noel Knight.

Photos Courtesy Gladding, McBean & Co.

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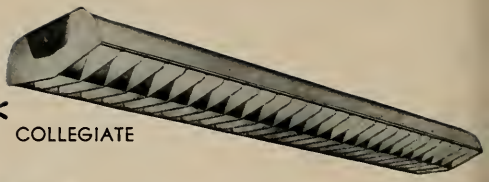

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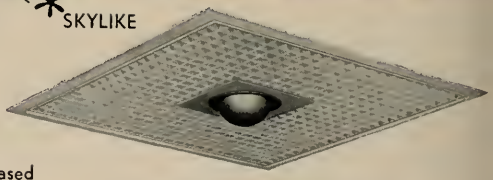

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NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, has arranged a group of exhibitions and special events which include the following:

EXHIBITS — Impressionism in American Art; Drake and Elizabethan Exhibition, sponsored by the Drake Navigators Guild and commemorating the 375th Anniversary of the Arrival of Sir Francis Drake at Drake's Bay, June 17, 1579; Clay for Today, the 8th annual exhibition of the Association of San Francisco Potters; Masterpieces of Pre-Columbian Gold, organized in collaboration with the Metropolitan Museum of New York and the National Gallery in Washington, representing 80 selected pieces of pre-Hispanic Goldwork from the collection of the Museo del Oro of the Banco de la Republica, Bogota, Columbia; and Ugo Andriano Graziotti, a group of drawings and sculpture.

SPECIAL EVENTS — Special Gallery tours and classes in art appreciation for adults and children.

WINNERS ANNOUNCED IN THE SAN FRANCISCO POTTERS EXHIBIT

Winners in the 8th Annual Exhibition of the Association of San Francisco Potters, now showing at the M. H. deYoung Memorial Museum in Golden Gate Park, include:

Helen Peeke was awarded first place for her "work which has utility as well as artistic value"; Ross Curtis, second place for ceramic sculpture; and Mary Lindheim third for "pottery whose decorations or surface treatment is best integrated to its form." Other awards went to Irene Hamel, Freda Burkhardt, Jack Miller, Ernie Kim, Peter Voulkos, John McDowell, Lilian Boschen, Eileen Reynolds, and Virginia Davidson.

Serving on the Jury were Tamuro Pasto, head of the Art Department, Sacramento Jr. College; Charles Lindstrom, educational director, deYoung Museum; Joan Pearson, head of the Ceramics Department, California School of Fine Arts; Eunice Prieto and Rex Mason, instructor of ceramics, University of British Columbia, Vancouver, Canada.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, presents the 13th Annual Pacific Coast Ceramic Exhibition. Prizes in sculpture for this year's show were awarded to: Manuel Neri for his subject "Bull", first award; The Patio Planter, by Viola Frey was awarded second place; and honorable mention was given Miriam Hoffman and Frances Moyer.

Jacomena Maybeck was awarded first prize in Ceramics for "Two Bowls"; Paul C. Volckening's "Branch Bottle" received second place; and honorable mention was given Patricia Lamerdin and Joan Jockwig Pearson.

The PICTURES of The MONTH features a group of lithographs by Utrillo, Vlaminck and Chagall.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has arranged a program of special exhibitions and events for June, which include the following:

EXHIBITS:—The Raoul Dufy Memorial Exhibition; Man's Right to Knowledge and the Free Use Thereof, an exhibition organized by Columbia University in honor of its bicentennial; Designer-Craftsmen, U.S.A., 1953; French Painting at Mid-Century; Smith College Collects; and Art of the Bay Region.

SPECIAL EVENTS: — Concerts of the Singers Guild, Composers' Forum, and Budapest String Quartet; Lecture Tours each Sunday afternoon at 3 o'clock; Discussions on Art each Wednesday evening at 8 o'clock; Motion pictures, Saturday and Sunday at 2:00 and 4:00 p.m. in connection with the Dufy Exhibition, and a special lecture June 10, by Dr. Grace Morley on "Raoul Dufy, Painter and Designer". Classes in art for children and adults are recessed for the summer, and will be resumed in the fall.

CALFORNA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, which is under the direction of Thomas Carr Howe, Jr., has arranged a number of special exhibitions for June which include:

EXHIBITIONS—Young American Printmakers, a showing lent by the Museum of Modern Art, New York; Watercolors and Drawings, by Gavarni; Bead Fantasies, by Edna Hesthal; 30 Years of Expressionism, 1904-1934, an exhibition of prints lent by the Museum of Modern Art, New York; and of special note is an exhibit of Ancient Art of the Andes, an exhibition of more than 400 priceless objects from private and public collections in South America, Europe, Canada, and the

(See Page 35)

RECENT SCHOOL FIRE TRAGEDY EMPHASIZES NEED OF PROPER DESIGN

CAUSE AND PREVENTION IS EMPHASIZED IN EXTENSIVE STUDY CONDUCTED BY LUMBER INDUSTRY GROUPS

Timely and constructive action was taken by the National Lumber Manufacturers Association and other lumber industry groups to keep the record straight on the safety of properly designed wood schools as a result of the recent Cleveland Hill School fire at Cheektowage, New York, which claimed the lives of fifteen school chidren.

The Erie County grand jury has also completed its investigation and returned its findings and recommendations.

In effect, the grand jury report absolved the type of construction of the building from having any relevancy to the loss of life. Before the facts were developed and officially made public, however, the catastrophe had inevitably brought adverse publicity implicit in such headlines as "Wood School Fire Kills 14, Injures Many Others."

Out of the immediate public reaction to the fire came a proposed resolution in the Buffalo city council "to eliminate all frame schools and replace them and all future buildings with brick or mortar." The Bulletin of the New York State Building Officials Conference, Inc., carried this editorial comment: "One thing is certain—the use of wood frame construction in school buildings and institutional buildings is a dangerous practice unless fully protected."

The National Lumber Manufacturers Association brought the grand jury report to the attention of the community and educators and civil authorities throughout the country, pointing out that the evidence indicated a "flash fire" caused the fatalities and injuries before the materials of construction had actually become involved in the fire.

The grand jury report and findings of the Association were also read into the proceedings of the Building Officials Conference of America, recently meeting in Philadelphia, with John Shope, Association Building Codes Director, pointing out the following:

"Being familiar with the fundamental requirements for safety to life in buildings, we know that the location and protection of exits, the type of contents and the type and condition of heating plants and other equipment have much greater bearing on safety to the occupants than does the type of construction in the building. We do not believe that the fact that the building in question was a wood frame building had significant bearing on the loss of life and the injuries. The evidence indicates that this was a 'flash fire' and it is quite probable that the deaths and injuries occurred before the materials of construction actually became involved in the fire. The fact that windows were broken to provide a means of escape from the fire indicates that the exterior walls were sound at that time."

Norman Reece, New York technical representative of the NLMA, was on the scene within a few hours after the tragedy and maintained cooperative contact with the investigating officials and groups throughout the period of the inquiry. A joint committee was also immediately appointed by the Buffalo Lumber Exchange and the Tallystick and Rule Club, headed by

(See Page 23)

American Institute Architects Award Honorary Membership

DR. RICHARD EUGENE FULLER, PROFESSOR OF GEOLOGY, UNIVERSITY OF WASHINGTON, GIVEN DISTINGUISHED AWARD

Dr. Richard Eugene Fuller of Seattle, Washington, was elected to Honorary Membership in The American Institute of Architects, and was awarded official Certificate from the Institute at its 86th Annual Convention, which was held this month in Boston, Massachusetts.

Honorary membership in the national professional architectural society is conferred upon persons otherwise ineligible for corporate membership, who have rendered distinguished service to the architectural profession or to any of its allied arts or sciences.

Dr. Fuller was chosen for this honor in recognition of his notable leadership in the creation of an outstanding center of art activity in the Northwest, to which he has contributed generously. Donor of the Seattle Art Museum, as well as of its superb collection of Oriental objects and jades, he has served as its President and Director since the Museum's establishment twenty years ago. Dr. Fuller is a former President of the Western Association of Art Museum Directors.

Through the Seattle Museum's annual Northwest

(See Page 35)

ALL YEAR HOME
OVERLOOKING PACIFIC

LAGUNA BEACH, CALIFORNIA

HARALD H. zurNIEDEN
Consulting Engineer
And Industrial Designer

Industrial Designer Harald H. zurNieden has completed and opened for inspection a HOUSE CONSTRUCTED ENTIRELY BY LAMINATION. This design out-of-the-future uses none of the usual methods of fabricating. Floors, walls, and roof are constructed by laminating timbers and planks together to form complete slabs. Where walls intersect, they are dovetailed so that the result is a one-piece building.

The laminated structure is a combination of holiday-house and year-'round home. The ground floor

consists of two living rooms, two bedrooms, and two baths. The main floor (on level above) has the kitchen, two bedrooms, a studio, a bath, and a large living room. All three bathrooms have separate outside entrances (for access to wash sandy feet when returning from beach). Living rooms open onto verandas across entire front of house at both floor levels. The laminations of planks form the walls, roof, and floors of the entire building.

ADVANTAGES of LAMINATED STRUCTURES

Raw material is easy to acquire, common kiln-dried wood planks such as 2 x 4, 2 x 6, are used for the entire dwelling. Easy to erect, easy to cut, easy to laminate! No waste of material—every foot can be used. Easy to decorate inside and out, easy to waterproof the roof. Laminated wood structures are more rigid, more earthquake-proof, more cyclone-proof, more fire-resistant than houses of ordinary frame construction . . . yet the material used for fabricating is ordinary wood. Windows and doors may be cut out of the laminated walls and roof WITHOUT destroying structural support.

The insulating qualities of the laminated-wood house are excellent—ability to keep cold out and heat in, (or vice versa), is inherent in this type of building. Thermal insulation is "tops".

In addition to these qualities heat storage capacity of walls and floors is over ten times greater than that of stucco and plaster.

The wall surfaces, both inside and out, provide a surface that is easy to paint or decorate—and at the same time the unique texture challenges the skill of the decorator. Walls and ceilings may be left natural, stained, painted, or even covered with paper, plywood, or plaster. Dramatic textural interest does not have to be improvised, it is built-in when the laminate is created.

Floors are sanded down to the conventional smoothness of hardwood floors—they may be stained, waxed, or carpeted.

WIND, FIRE, EARTHQUAKE

These normal enemies of all types of housing meet an extra amount of resistance when they attack a laminated-wood structure. Walls, floors, roofs made from stout planks "welded" together under pressure

VIEW of blue Pacific Ocean from Living Room

with adhesives which provide an everlasting bond are able to withstand terrific wind pressures and excessive amounts of strain and stress imposed by undulations and gyrations of earthquakes. Glued laminated walls and floors are very fire-resistant. Laminated solid wood keeps its strength unimpaired thru fires of considerable duration. (Test this in your own fireplace by burning a solid book, and then some loose pages).

SITE

The zurNieden laminated house is located at 10011 Ledroit Lane, Emerald Bay Terrace, near Laguna, California.

Emerald Bay and Emerald Bay Terrace are exclusive residential areas, populated by people who seek and enjoy moderate seclusion near the metropolitan centers of Los Angeles and San Diego. The climate is mild, on the seacoast, and is conducive to all-year outdoor living. The view from the zurNieden house is unobstructed—Palos Verdes, Newport, and other beach towns are visible, the island of Santa Catalina can be very plainly seen in the blue Pacific. The floor plan and layout of the house provide fullest enjoyment of the view in all directions. Front glass walls are facing the sea—glass is also used profusely in the west wall which also faces the sea and overlooks the town of Laguna.

VIEW of Kitchen

Australian Architecture

Viewed By

Los Angeles Town Planner

By PETER KNOX

TOP VIEW: Shows the new city of Canberra as seen from the air.

LOWER VIEW: Is a portion of the original Burley Griffin plan for Canberra. Certain modifications are being made in the present development program.

All Illustrations are Australian Official Photographs

PARLIAMENT HOUSE, Canberra, set in patterns of lawns, flowering shrubs, and beautiful rose gardens.

Charles B. Bennett, director of town planning for the City and County of Los Angeles, California, inspected Australia's newly planned national capital which is taking form at Canberra, at the invitation of the Town and Country Planning Association of Victoria.

Although his stay in Australia was somewhat limited, and a good portion of time devoted to viewing the new work at Canberra, and other planned projects in Melbourne, the population trends and expansion of cities and communities which offered planned administrative programs was also given attention.

Of the new national capital, Bennett declared: "Canberra's setting is magnificant. The city is the beginning of a modern Utopia. I do not know of a better designed city of comparable size anywhere."

His praise of the city surprised even the natives, who by now are accustomed to hearing experts say that their city is "unique in design" and an "oustanding example of planning." To the uninitiated layman,

UNUSUAL FOUNDATION: This block of home units has been designed to provide space for lock-up garages and a car port.

Canberra today is a half-built city with sheep grazing in fields between suburbs and rabbits scuttling about in paddocks near commercial centers. True, there are magnificent embassies and legations, imposing public buildings, acres of fine tree-lined suburbs, but they are all linked by vast bare paddocks and hills that still await the builder.

Eventually these spaces will be filled with more parks and gardens, neat cottages with fine green lawns, shops, schools, winding crescents, and tree-lined drives. But right now, to the unpracticed eye, Canberra seems to be a system of disembodied suburbs in search of a city. To Bennett's practiced eye the city looks very fine indeed.

Bennett, of course, has been familiar for a long time with the original Canberra plan, which is well-known throughout the world's town-planning circles. This plan was submitted by Chicago architect Walter Burley Griffin soon after the Australian Government announced, 1909, that it would build a model capital in the rolling uplands of Southern New South Wales.

Griffin's winning design had two focal points—Capital Hill, near the site of the permanent Parliament House, and Civic Center, hub of the future commercial

A BLOCK of the MODERN HOMES

Impressive units such as these represent the newer architecture of the capital city of Sydney, New South Wales.

Each of the complete living units is owned by the tenant.

TYPICAL FACTORY

View of a typical factory building.

GOVERNMENT HOUSING

This huge building in Sydney, has 309 individual flats and accommodates 1,000 persons.

Erected at government cost exceeding $4,500,000; 1 and 2 bedroom flats rent for $15 to $20 per week.

Project is located at Milson's Point, overlooking harbor.

OFFICE BUILDING

Combined offices and production factory of the Elliotts and Australian Drug Co. at Rosebery.

ANOTHER VIEW GOVERNMENT HOUSING

Project located at northern end of the Sydney Harbour Bridge, provides 309 individual flats for the accommodation of 1000 persons. Low rentals.

life of the city. From these points sweep the main roads and their subsidiary circles and crescents — the bane of out-of-town motorists and the pride of local experts.

Through the center of the city runs the willow-lined Molonglo River. It is not a big river—in fact, it has a full-time job to keep flowing in the dry summer months —but it may eventually be dammed to provide water for the ornamental lakes planned in the original Griffin submission. The lake designs have been modified over recent years.

Framing the Molonglo Valley are the Blue Mountains of the Australian Alps, which are often snow-capped in winter when they provide ideal conditions for skiing, but they also act as relay posts for knifing, icy winds which, at times, howl mercilessly around Canberra for days on end. Fortunately for Bennett, he saw the city in flawless, crisp sunshine which it much more frequently provides.

The neat suburbs, impressive public buildings, and spreading parks and gardens of Canberra lie in this broad valley 2000 feet above sea level, 190 miles from Sydney. Coming by road from Sydney the first view anyone gets of the City is the sprawling, mushrooming

Two views of typical Australian governmental housing projects — designed for low cost living.

residential suburbs of Turner and O'Connor, lustily pushing across fields and up hills. On the left is the old-established suburb of Ainslie, nestling against the slopes of Mount Ainslie, and running into the suburbs of Reid and Braddon, which, in turn, fringe Civic Center.

Civic Centre is the nearest approach to the conventional city found in Canberra, and even it is unusual. It consists, at present, of two shopping blocks at the foot of gently sloping tree-topped City Hill. Eventually there will be a circle of commercial and civic buildings around the base of the hill, and these will be the city's commercial focus.

Two main roads run from Civic Center. The right hand one curves along the Acton Ridge, past the impressive greystone Institute of Anatomy and the growing Australian National University, the Canberra Community Hospital, and the Canberra landlord — the Department of the Interior. Then it crosses the Molonglo River to link with the left hand road from Civic Center to form imposing Commonwealth Avenue.

This avenue is flanked by the Albert Hall where many important official events are staged, and Canberra's leading hostelry, Hotel Canberra, before it reaches the group of administrative buildings at its southern end. Here is the provisional Parliament House, a low, white building surrounded by a pattern of green lawns, flowering shrubs, and rose gardens.

FORD MOTOR COMPANY factory at Homebush, a suburb of Sydney.

On either side are large administrative offices, and at its right front is another administrative block which will accommodate 3000 workers when completed.

Below this cluster are the old-established suburbs of Forrest, Kingston, Manuka, and Griffith, with shopping centers at Kingston and Manuka. New suburbs, Narrabundah and Yarralumla, are spreading

RAILWAY STATION being built on Circular Quay, links Sydney's network of underground electric trains with suburb routes.

ENTRANCE is attractive

SCHOOL COSTS CUT

IN MAJOR SCHOOL PROJECT

BOISE — IDAHO

By ARTHUR W. PRIAULX

VICTOR N. JONES

&

Associates

AIA

ARCHITECTS

Boise, Idaho's West Junior High School, designed by Architects Victor N. Jones & Associates, AIA, is an outstanding example of a low-cost school plant which combines maximum functional and service requirements in a structure planned for permanence.

This 26-classroom building, which also includes library, music room, multi-purpose room, locker and shower rooms, toilets, kitchen and dining rooms and administrative suite, was built for $8.70 a square foot. This cost does not include expense of grounds nor architect's fees. The entire school contains 57,516 square feet and cost $500,000.

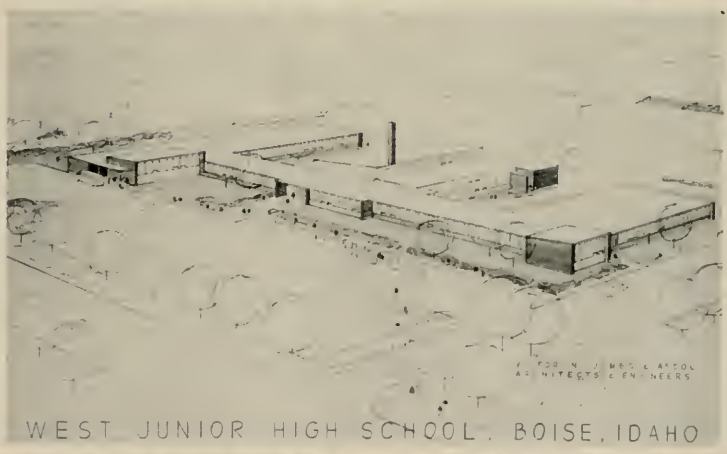
The architects used a modified W floor plan which enabled them to save money on utilities, hallways and

ENTRANCE

This close-up view highlights the simpleness of lines and elimination of costly frills.

ARTIST SKETCH

Shows handling of parking, ease of entrance from several directions, and gives an idea of the landscaping and other exterior facilities.



Fits Well Into Site

THE SIMPLICITY

Of the building is well illustrated in this central corridor adjoining the administrative suite.

GLASS WALL

Use of nearly solid glass wall provides maximum natural light for every room.

roof structure. A simplified roof assembly built with glu-laminated beams covered with two-inch tongue-and-groove fir decking is a feature of this school. The beams and decking have been stained a natural color and left exposed in most of the classrooms, thus saving costly ceiling installation.

Another cost saver was in the planning of the main hallway which serves the classrooms and administrative offices located in the main or base wing so that the hallway also doubles to serve rooms in the three right-angle wings where they join the principal structure.

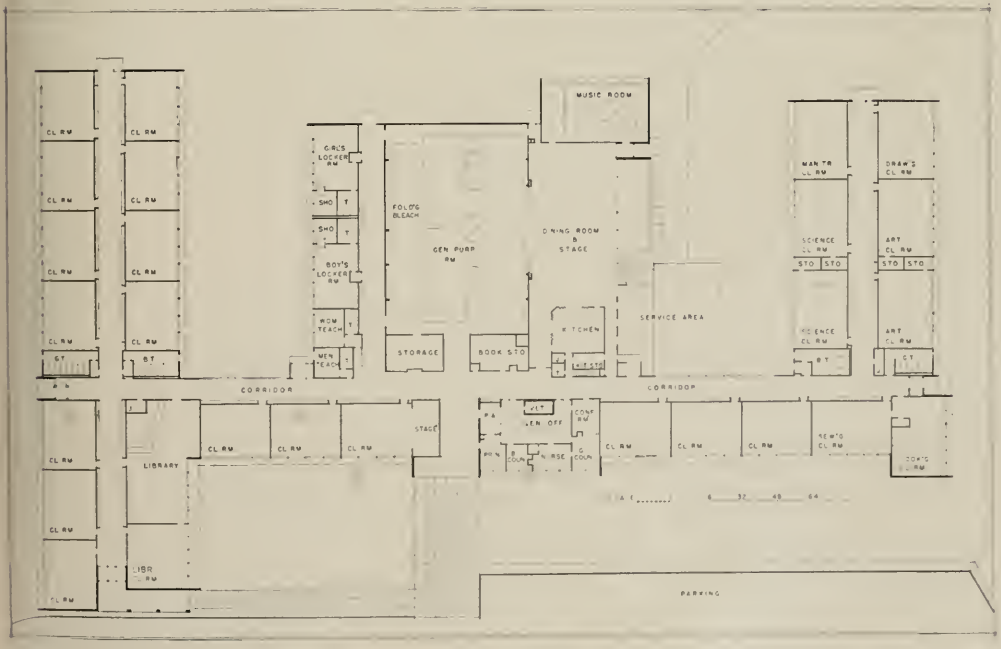
A third major saving was accomplished by installation of a concrete tunnel around the perimeter of the entire structure which contains the heating and water piping.

The building is adequate, but minus costly frills. The Boise school district, like almost every sister district in the West, is confronted with the problem of providing classrooms at once to care for a burgeoning school population and limited by funds to provide these structures.

Planning of this building was under the direction of Dr. Zed L. Foy, superintendent of schools, now on a two year leave on educational assignment in Israel. Acting Superintendent D. C. DeBeaumont was in charge during construction. The general contractor,

CURVED BOOMERANG TRUSSES seen here create a striking effect in this multi-purpose school room.

Below is Plan of lay-out.



KITCHEN is compact area with maximum utilization of floor space. Each kitchen unit is complete with range, work area, storage cabinets and drawer space identical.

C. B. Lauch Construction Company, gives maximum cooperation to the architects in an effort to hold costs down. Here is an excellent demonstration of what can be done when there is intelligent teamwork between architects, school authorities and contractors.

West Junior High School is one of four similar schools in Boise which house seventh to tenth grades. Overcrowding in the senior high school, which serves only the two upper grades, will be solved in the near future with the construction of another high school, so the school system can revert to the conventional 6-3-3 system of class divisions between elementary, junior and senior high schools.

The total cost includes all mechanical work, electrical, two large cesspools, septic tanks, underground electrical and telephone service, sidewalks, roadways, and all built-in cabinet work.

The school building has been arranged so that all arts and crafts are located at the north end of the school and the classrooms for academic courses and library are in the south end. The music room is located behind the dining area to isolate the usual noise from this department. No objections have been voiced to students using the dining area as access to the music rooms.

An interesting feature is the eight-foot module plan of the structure with four-inch pipe columns on eight foot centers supporting the glu-lam beams. There are 180 glu-lam beams in the classroom areas. These beams are 5¼ by 14⅝ inches.

The multi-purpose room is post free as is the dining area, which at present doubles as a stage and assembly

ANOTHER VIEW OF

Multi-purpose room showing stage archway in rear which opens into a dining room that also serves as the stage when so desired.

room. Six boomerang type laminated arches nine by thirty-eight inches are used to span the maple-floored multi-purpose room. Smaller glu-lam beams seven by twenty-eight inches were used in the dining room with 24 purlins 3¼ by 11⅜ inches completing the ceiling and roof assembly in this area.

On top of the decking is a vapor barrier, two inches of rigid fibreglass roof deck insulation topped with a 20-year built-up roof and gravel.

"This is by far the fastest to erect, and most economical roof system we have used to date," says Anton Dropping. Incidentally the old firm name has been changed to Jones & Dropping, Architects.

The entire floor of the school is concrete on a gravel fill. All floors have been covered with asphalt tile except in the library (cork), lockers, showers, janitor closets and toilets (ceramic tile) and multi-purpose and dining rooms have maple.

The heating system consists of two low pressure boilers and another similar boiler for hot water. All classrooms are heated by a unit ventilator type heater, each with its own thermostat. Corridors and small rooms are heated with steam convectors. There is a central air-conditioning system in the multi purpose room.

The boiler room is located under the kitchen area. Because the water level is high in this area in the fall due to irrigation, the boiler room had to be completely waterproofed. The boiler room floor also had to be reinforced to prevent hydrostatic pressure from lifting the floor during high water.

Primary power is brought to the transformer vault underground. Most of the lighting in the building consists of 2-lamp fluorescent luminaries with instant start ballasts.

The architects have been able to create a most pleasing building with cheerful, well-lighted classrooms by a careful combination of the best qualities of timber and wood with glass and masonry. Acoustical tile ceilings have been used in the corridors, library, multi-purpose, dining and music rooms and in the administrative suite. The structure is single-story with the exceptions of the two-level dining and multi-purpose rooms.

TYPICAL CLASSROOM with exposed beams and ceilings and glass wall.

A.I.A. CHARTERED

SOUTHWEST WASHINGTON CHAPTER

ARCHITECTS

CHARTER MEMBERS: Front (left to right) Charles W. Lwa, Jr., Marshall W. Perrow, W. W. Durham, George Gove (F.A.I.A.), and Robert H. Wohleb.

Standing (L. to R.) Gilbert M. Wojahn, Percy G. Ball, Silas E. Nelsen, Charles T. Pearson, John G. Richards, Joseph H. Wohleb, Nelson J. Morrison and Robert B. Price.

The architects in Tacoma, Olympia and adjacent territory were recently granted a charter to form the Southwest Washington Chapter of The American Institute of Architects, and at a recent special dinner-meeting the Chapter came into official being.

Officers chosen to serve for the first year were: Nelson J. Morrison of Tacoma, president; Gilbert M. Wojahn, Tacoma, 1st vice-president; Robert H. Wohleb, Olympia, 2nd vice-president; Gordon N. Johnston, Tacoma, secretary; and Robert A. Parker, Tacoma, treasurer. Elected to serve on the Board of Directors were Silas E. Nelsen and Lyle N. Swedberg, both of Tacoma.

National officers of the A.I.A. together with architects from adjoining Chapters participated in the charter festivities, and presidents of all A.I.A. Chapters in the Northwest Region, of which the new organization will become a part, held an executive meeting in Tacoma the day of the Charter meeting. The Northwest Region incorporates the states of Washington, Oregon, Idaho, Montana and the Alaska territory.

"The Southwest Washington Chapter joins a national group which is composed of approximately one-hundred and twenty individual chapters, located in the forty-eight states of the nation and territories, representing an architectural membership of more than ten thousand men," Nelson J. Morrison, president, remarked in assuming leadership of the Chapter for its first year. The new chapter's territorial division includes the counties of Grays Harbor, Mason, Thurston, Pierce, Pacific, Lewis, Cowlitz, Wahkiakum, and Skamania. It also represents the third A.I.A. Chapter in the State of Washington, the other two being The Washington State Chapter, established in 1894, and The Spokane Chapter which represents the eastern portion of the State and has the Columbia River as its western boundary.

Members of the new Chapter are: Dr. Paul R. Fossum, Honorary Associate; George Gove, F.A.I.A.; Percy G. Ball, William W. Durham, Byron F. Jacobson, Henry Kruize, Jr., Charles W. Lea, Jr., Charles T. Pearson, John G. Richards, Silas E. Nelsen, Marshall W. Perrow, Robert B. Price, Charles V. Rueger, Clarence R. Rueger, Joseph H. Wohleb, Robert H. Wohleb, Gordon N. Johnston, Robert A. Parker, Lyle N. Swedberg, Gilbert M. Wojahn, Robert W. Evans, Nelson Morrison, Donald F. Burr, G. Stacey Bennett, Warren Brown, Robert Jones, Alan Liddle, Louis M. Pedersen, and James Wilson.

SPECIAL ANNOUNCEMENT

STARTING NEXT MONTH

The first of a two-installment illustrated article dealing with scientific and technical aspects of "Community Centers", and "surburbal shopping centers" will appear in ARCHITECT & ENGINEER magazine.

FRANK EMERY COX
Shopping Centers

The articles have been prepared by Frank Emery Cox, technical consultant of the Kawneer Company, who since graduation from college, has had 15 years' experience in sales management, sales promotion and advertising; 5 years in the building material and construction business; 5 years in education with the California State Department of Business Education; and 9 years with the Kawneer Company in sales promotion, training, and merchandise research.

In the latter connection, travelling over a million miles from Mexico to Alaska and into the Pacific Islands making studies of the trends of urban development. In this connection the observation of the development of perimeter shopping centers came in for special education. Emphasis in these studies placed on the economic background of the area's relation of various types of business to each other in the centers, off-street parking facilities, sales per square foot in relation to rent paid, promotional features of the centers, and shopper circulation. Studies have included the analyses of over 500 shopping centers from the smallest, $100,000 a year annual sales to the largest, $100,000,000 a year in retail sales.

In addition, Cox has made an intimate diagnosis of the established retail and commercial areas both in downtown as well as the sub-center districts. In this connection, his investigations of the preservation of commercial property values have gained them national recognition. His development of a commercial real estate analysis chart has brought him into close contact with building management groups and commercial retailers.

In the course of his lecturing, he had made over 1000 talks before various groups on subjects of urban development, preservation of commercial property values, modernization of main street, off-street parking, real estate analysis to improve the landlord's return on investment and many other related topics.

In the course of his lectures, he has addressed many A.I.A. groups on the subject of shopping center planning and downtown property values. Other groups for whom he has spoken are National Association of Real Estate Boards, National Institute of Real Estate Brokers, Regional A.I.A. Conference, U. S. Chamber of Commerce Urban Development Clinics, various trade association conferences, national and regional, chambers of commerce and service clubs from New York to Honolulu, retail boards, publishers' associations and many others. Mr. Cox has been a contributor to many magazines and his articles on such subjects as the dynamite involved in downtown property value preservation, off-street parking and the other subjects of his special study have appeared in many national magazines. Mr. Cox has contributed a semi-syndicated series of articles on the subject of "Downtown Dynamite" which have appeared in many newspapers throughout the United States and Canada.

As a speaker and a writer, he is much sought after. His style is forceful and direct and his approach is a fearless one, dealing with facts and down-to-earth subject material.

As a consultant on the planning of shopping centers, he is constantly being approached by developers and architects from all over the North American continent.

SCHOOL FIRE

(From Page 5)

James Grant, Jr., president of the National Association of Commission Lumber Salesmen.

In a story in the Buffalo Courier-Express, it was stated in part: "A strong plea for better design of public—and private—buildings is being made by the lumber and associated industries. The point is made . . . that 'wood does not burst into flames spontaneously; most fires start in the contents of a building and not in its structural parts. Improperly designed buildings, whether of temporary or permanent nature, without adequate exits and fire protection devices such as sprinkler systems, fire doors, vents, louvers and draft curtains should have immediate attention of parents and teachers alike. . .

" 'Poison gases, heat, smoke and expanded air all run ahead of flames. These are your enemies and every precaution should be taken to insure that either existing buildings or new buildings are properly protected'."

The report of the grand jury in the Cleveland Hill School fire centered on the "extremely defective" heating plant and auxiliary equipment. Its conclusions were as follows:

"The fire which occurred was of an extremely rapid nature, generating intense heat and engulfing the entire building within a very short period of time . . .

(See Page 25)

EXTENSIVE PLANT EXPANSION PROGRAM
ANNOUNCED AT THE

KRAFTILE ANNUAL DEALERS' DAY

CONFERENCE AT NILES

CHAS. KRAFT
President

Officials of the Kraftile Company announced a pleasant suprise to building material dealers and distributors gathered in Niles, California, to observe the Annual Kraftile Dealers Day, when they reported work had started on a $500,000 modernization plant expansion program.

Ground breaking ceremonies were observed early in April, and "marked the second phase of Kraftile's program to expand the manufacturing, service, and warehouse facilities in keeping with the rapidly growing construction industry on the West Coast," declared Chas. Kraft, president, in announcing the project to the dealers assembled.

Kraft also pointed out that based upon motion studies and time analysis, the new facilities of the plant will result in lower product costs, and that these "anticipated" savings are already being considered in instances where "future" price considerations are possible.

Jim Crawford, Kraftile Sales Manager, pointed out that product prices were already slightly under a year ago, and that construction contracts in the main, were on the increase, "thereby offering an ever growing opportunity for our products". Completion of the new manufacturing plant, anticipated for sometime in July, will give dealers of Kraftile products every assurance of delivery and complete company cooperation.

Dealers from all parts of northern California, and their wives, attended the luncheon, following which they were taken on an employee-conducted tour of the Kraftile manufacturing plant and given the opportunity of viewing first-hand the half-million dollar expansion project.

JIM CRAWFORD
Sales Manager

R. W. Harrington, Regional Manager of the Structural Clay Products Institute, was the guest speaker at the luncheon, taking as his subject "Design-Rather Than Material for Earthquake-proof Building."

SCHOOL FIRE

(From Page 23)

This grand jury has been unable to arrive at a conclusion beyond a reasonable doubt as to the specific cause of the fire. However, we feel that certain conclusions and recomemndations are not only justified, but required under the circumstances.

FIRST: The condition of the heating plant in this school was extremely defective, due to the absence of the thermostatic control system for which it was designed, which would, in and of itself, promote and increase the safety of operation.

SECOND: Due to the deterioration since the summer of 1952 of the plates in the side wall of the fire box and of the chimney stack, together with a broken damper control rod, and the fact that an induced draft fan in the chimney stock and circulating air fan in the delivery system was not operating for a considerable period of time prior to the fire, a definite fire and/or asphyxiation hazard existed.

THIRD: The windows in this school room were of a type which obstructed the exit of the pupils and teachers from the room, after the discovery of the fire. We say this with full appreciation of the fact that windows are not the best means of escape to be afforded under such circumstances.

FOURTH: The duties and obligations of the custodial personnel of this school were not clearly defined or specifically delegated; therefore, definite obligations for inspection of equipment, reporting defects and the remedying of said defects were lacking.

We, therefore, recommend to the legislature of the State of New York and such other appropriate authorities having jurisdiction that such steps be taken as may be deemed necessary for the purpose of establishing uniform regulations to control the physical plant operation of schools, to insure proper and thorough delegation of authority and responsibility and to provide for adequate means and facilities for periodic inspection of plant equipment.

We further recommend that such authorities make further regulations providing for entrances and exit areas to all buildings of this character, including the placement and regulations of doorways, hallways, and windows.

We recommend that a copy of this presentment be submitted to the Erie County Board of Supervisors, the Erie County Health Department, the Erie County Fire Co-Ordinator, the State Division of Safety and the State Department of Education, for their consideration."

ENGINEER AT CONFERENCE

Harold B. Gotaas, professof of sanitary engineering at the Berkeley campus of the University of California, recently completed an appointment with the World Health Organization in Geneva, Switzerland.

WILL INSURANCE COVER YOUR LOSS?

The problems of legal liability affecting the contracting field are more numerous and varied than those of any other industry.

As a result, every set of specifications refers to contractor's liability for bodily injuries sustained by members of the public, and damages to the property of others caused by the contractor's operations, and in some instances go even further in outlining the responsibility for accidents caused by the joint negligence of the contractor and the owner.

HENRY J. TRAINOR
Consultant, Miller & Ames, Insurance Brokers

The Certificates of Insurance provided by the contractor's insurer to the architect as evidence that Liability insurance is carried will generally show the contractor is carrying a Comprehensive Liability policy, although the exact designation may vary with insurance companies. Unfortunately, since the form of policy is not standard, the policy is frequently not all that the name implies.

The Comprehensive Liability policy is actually a combination of six different policies, and the insured has his choice of including or excluding any of the various types of coverage. The policy can insure the contractor's liability arising from his own operations, his subcontractor's operations, his own automobiles or those which he uses but does not own. It may insure liability he has specifically assumed under contract, or from work which he has completed.

The contractor's operations are, of course, those performed by his employees. It does not include work performed by subs. Were the policy fully comprehensive, it would insure any accidents arising from the work but every policy carries certain basic exclusions. Operation of aircraft or watercraft is generally excluded. So are injuries to employees, for which Compensation insurance is carried. Similarly, the policy will not pay for damage to property owned, rented or leased by the insured or in his care, custody or control.

Some policies exclude damage caused by discharge, leakage or overflow of water or steam from plumbing or heating systems, an uncomfortable exclusion for the mechanical contractor.

Still, others may apply to certain types of work, such as damage caused by blasting or explosion, collapse caused by excavation, tunneling or pile driving, or damage to wires, pipes, conduits or mains caused by the use of mechanical equipment. We have actually seen a policy issued to a pile driving contractor which excluded property damage caused by pile driving! In another instance, we came across a policy which excluded damage to wires, pipes and conduits. The contractor, of course, specialized in sewer construction in the heart of the city. In neither instance was the contractor aware that such an exclusion existed, but obviously, he was getting very little protection for his money.

Insurance for liability arising out of the operations of independent contractors, commonly called contractor's protective liability insurance, is usually, but not necessarily purchased under the Comprehensive Liability policy. Under common law, the master is responsible for the acts of his servants, and this relationship exists between the prime contractor and his subs. There are also certain non-delegable responsibilities which cannot be passed off on another. For example, a contractor cannot relieve himself of the responsibility for damages caused by blasting in the heart of town by merely subbing the work to Joe Doakes. He can, to some extent, share the responsibility but he cannot shed it. The contractor's protective insurance will generally provide the necessary protection but, again, while the exclusions applying to this coverage are not so numerous as those applying to direct operations, it is necessary to examine the policy to determine if necessary protection is afforded.

EDITOR'S NOTE: The insurance brokerage firm of Miller & Ames, San Francisco, has for many years specialized in administration of insurance programs for all phases of the construction industry, and further explanation of any points raised in this series of articles will be gladly furnished upon request.

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WASHINGTON STATE CHAPTER

The recent Annual A.I.A.-Student-Alumi meeting at the Seattle Yacht Club was another outstanding meeting of the year. Honors and awards were bestowed upon architects, clients, and students, with Prof. Glenn Hughes, director of the School of Drama, University of Washington, the principal speaker.

A special exhibit of work by students and architects was arranged for the meeting at the School of Architecture at the U. W. and was in charge of Aaron Freed.

New members include: Albert D. Poe and Tsutomu G. Saito, Seattle, Associates; Herbert J. Bittman, Felix Campanella, and Eugene Martenson, Seattle, Junior Associates; and Student Associates Robert W. Beatty and Dean Latourell of Seattle.

FRANK LLOYD WRIGHT EXHIBIT

The Frank Lloyd Wright Exhibit was opened June 2 in Barnsdall Park, 1645 North Vermont Avenue, Los Angeles, and will continue to be open to the public daily (except Mondays) from noon until 9:45 p.m., through Sunday, July 11.

EAST BAY CHAPTER

The June meeting was the annual College of Architecture, University of California Awards Dinner, with both the East Bay and the Northern California Chapters participating. Purpose of the annual event is to honor graduating architectural students, to present A.I.A. awards to outstanding students, and to offer an opportunity for architects and students to mingle on an informal basis.

The program comprised a general discussion of "where are we headed", "The Practice Act—sufficient

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Victor L. Wulff, President; Richard L. Pinnell, Vice-President; Edward G. Halliday, Secretary; Delmar S. Mitchell, Treasurer. Directors, Donald Campbell, Jack R. Lewis and Louis A. Dean. Sec'y Office, 4562 Boundary St., San Diego.

San Joaquin Chapter:
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Santa Barbara Chapter:
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Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

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Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
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Spokane Chapter:
Tom Adkinson, President; Carroll Martel, Vice-President; Harry Weller, 2nd Vice-President; William James, Secretary; Lawrence Evanoff, Treasurer. Office of the Secretary, W. 524 - 4th Ave., Spokane.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Baget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

or inadequate?", "The Dues Structure", "Mutual Exchange of Technical Information", and "The Future and Function of Bureaus."

The Members include John Wagenet and John Papadakis.

OREGON CHAPTER

The June meeting, held in Irelands at Lloyds in Portland, was devoted to a panel consideration of the subject, "The Significance of Design in Attaining a Successful Practice", and "Chapter Responsibility in Community Affairs". Meetings will not be held during the summer months, but will be resumed in the Fall, according to Holman J. Barnes, President.

NORTHERN CALIFORNIA CHAPTER

Wendell Spackman was elected to serve as president of the Chapter at the recent annual meeting. Elected to serve with him were: Wayne Hertzka, vice-president; Leffler Miller, secretary; Bernard Sabaroff, treasurer; and directors William Corlett, Robert Kitchen, and Donn Emmons.

Donn Emmons, William Wurster, Clement Ambrose, William Knowles, Donald Kirby, Ted Moulton, Helen D. French, Charles Pope, George Downs, Francis J. McCarthy, Ernest Winkler, and F. Bourn Hayne were Chapter delegates and attended the recent A.I.A. Boston convention.

SAN DIEGO CHAPTER

"Fire Protection" was the subject of a round-table discussion at the June 9th meeting, with Sidney Franklin, Fire Marshall for the San Diego Fire Prevention Bureau; Robert Dorland, Chief Building Inspector, City of San Diego; Richard T. Hamel, Fire Prevention Engineer, State Fire Marshall's Office, Los Angeles; Louis Almgren, Pacific Fire Rating Bureau; Daniel W. Jacobson, Chief of Fire Prevention Division, 11th Naval District, speaking on the subject: "Adaptations of fire Protection Engineering in Modern

(See Page 33)

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Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

W. S. Wassum, President; Charles M. Herd, Vice-President; J. F. Meehan, Sec-Treas. Directors: L. G. Amundsen, M. A. Ewing, Chas. M. Herd, R. F. Silberstein and W. S. Wassum. Office Sec. 68 Aiken Way, Sacramento, Calif.

American Society of Civil Engineers
Los Angeles Section

Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco

Col. Marion J. Akers, Chief of Staff of the Air Force Flight Test Center, Edwards AFB, Muroc, was the principal speaker at the June 10th meeting held at the Presidio Officers Club, San Francisco.

His subject was, "Testing Jet Planes," and in addition to telling many interesting things about aircraft testing, Col. Akers showed a colored sound film on the subject, which had just been released.

Col. Paul D. Berrigan was elected President of the Society at the annual meeting, and chosen to serve with him during the ensuing year were: CDR Paul E. Seufer, First Vice-President; CAPT H. H. Bagley, Second Vice-President; Robert P. Cook, Secretary, and Hiram F. Scofield, treasurer.

C. E. Bently, F. R. Fowler, COL L. R. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel, were all named directors. GEN D. F. Johns was named Ex-officio Director.

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STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

Norman Kelch, director of the Brick Manufacturers Association, was one of the speakers at the June meeting, taking as his subject the recent developments in reinforced brick masonry as the result of research. The speaker pointed out that great strides had been made in construction materials and methods during the past few years and that newest data was easily available to those who desired it.

Of interest also was a discussion by Orvil Tuttle, vice-president and general manager of Honeycomb Structures and Honeycomb Company of America, who explained the characteristics and uses of Honeycomb Structures which are hexagonal cells of impregnated paper or cotton, sandwiched between plywood or metal panels. This product has been widely used in aircraft construction, for military housing, and other applications where light weight, ease of erection, stiffness, strength and insulation are prime considerations, but cost is not a major factor.

New Members include Lloyd S. Dysland, Member; John G. Moffatt, Associate; and Greely H. Scott, Affiliate.

AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco

S. D. Bechtel of the Bechtel Corpn spoke at the regular June meeting on the Cerro Bolivar Project, describing the Venezuelan venture which is a development project for the U. S. Steel Corpn.

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of Oregan
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Rass, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rasé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices. L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials Northern California District
L. A. O'Leary, Chairman; P. V. Garin, Vice-chairman; H. P. Hoopes, Sec. Office Sec., 1550 Powell St., Emeryville, Calif.

Society of American Military Engineers—San Francisco Post
CDR N. M. Martinsen, President; L. L. Wise, 1st Vice-President; Col. Paul Berrigan, 2nd Vice-President; R. M. Hamilton, Secretary; Thomas Hurley, Treasurer. Directors, RADM C. A. Trexel, J. G. Wright, LTCOL C. S. Lindsey, C. E. Bentley, F. R. Fowler, BRIGEN D. F. Johns, and RADM L. N. Moeller.

STRUCTURAL ENGINEERS PLAN FOR ANNUAL CONFERENCE

Members of the Structural Engineers Association of California will hold their 1954 Annual Convention at the Hotel Del Coronado, Coronado, October 14-16.

STRUCTURAL ENGINEERS (Southern California) Convention Committee: Marvin Kudroff (left to right), William Wheeler, Ben Benioff, George Carroll, Joseph Sheffet, LeRoy Crandall, R. W. Binder, Harold P. King, George Youngclaus, Leroy Frandsen, and George de la Vergne.

The site of the convention is only a short distance from Old Mexico and numerous places of historical interest in California. The Structural Engineers Association of Southern California will serve as hosts for this convention and have plans under way for a well rounded technical program which will include outstanding speakers from the East as well as California. Extensive social activities are being programmed for entertainment of the ladies, as well as a golf tournament and other relaxing events for the members.

Convention committee Chairmen and their advisors are exerting every effort possible to make the 1954 convention educational and entertaining, and the Technical Committee is working hard to provide an outstanding program and to make the convention memorable and enjoyable.

Detailed information relative to reservations, registration and the program will be available in the near future.

SAN FRANCISCO FEMINEERS

A "Chinese Auction" highlighted the June meeting, held in the Elks Club building in San Francisco, when members gathered together a varied array of "white elephants" and sold them to the highest bidder.

Proceeds from the auction will go toward the schol-

(See Page 35)

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PRODUCER'S COUNCIL PAGE

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"CARAVAN" TABLE-TOP MEETING
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RETROSPECT—1953-'54

The 1953-'54 Producers' year brought considerable activity, some S.O.P., some new.

Highlights of the new being the Traveling Caravan Table-Top Display, the Local Chapter Product Literature Competition; and Action Informational Meetings.

The Table-Top Caravan on the national level proved to be a most outstanding new concept for display of building materials. Also in the attendance of some 575 individuals was the largest gathering the local chapter had. The National Chapter indicating ours to be one of the better showings to date.

Local product literature judging was initiated this year which brought forth many helpful and interesting suggestions from the jury for better use of the literature through composition and utilitarian design. The jury being composed of four architect members of the Building Construction Committee of the Northern California Chapter A.I.A., chairmanned by Mr. Leonard M. Tivol.

Such informational meetings as Gladding McBean's —"Let's Face it" (ceramic veneer); Alcoa's—"Light Weight Curtain Wall & Spandrel"; School Plant Planning Laboratory, Stanford University, "What the Educator Wants in Classroom Thermal Environment;" Kyle Prefab Steel Company's, "Light Gage Nailable Steel Framing;" PG&E, "Light a Commodity;" Reynolds Metals Company, "Industrial Aluminum Products", all contributed greatly in making the program year a very successful one.

This next year another fine schedule of informational meetings will be set up so we urge all who possibly can to attend. Just viewing the subject matter of the above past meetings certainly creates a strong desire to attend.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

LOW RENT HOUSING PROJECT PROGRESS

The Hunters View low-rent housing project being developed on Evans street and Middlepoint Road in San Francisco, by architect Donald Beach Kirby, is progressing right on schedule with the architect recently requesting bids.

The project calls for the construction of 350 units at an estimated cost of $3,000,000.

SUGAR COMPANY WILL BUILD

The Holly Sugar Company, San Francisco, recently acquired a site in the City of San Mateo, and plans have been announced for the construction of a new 1-story reinforced concrete building at an estimated cost of $150,000.

Clarence W. Mayhew, San Francisco, is the architect.

MEN'S RESIDENCE HALL AT STANFORD

The architectural firm of Spencer & Ambrose, San Francisco, has completed drawings for the construction of eight 3-story men's dormitory buildings on the Stanford campus at Palo Alto. The project will also include a combination administration and kitchen-dining room building with connecting corridors and lounges.

Estimated cost of the work is $2,750,000.

SAFEWAY BUYS PLANT SITE

Safeway Stores, Inc., of Oakland, recently announced the purchase of a site in the Harbor Gate Housing Project near Richmond in Contra Costa county.

The firm plans construction of a grocery warehouse, frozen food building, meat-box building, box return and salvage building, a foods processing building and a truck repair shop building on the site.

ARCHITECT IN NEW OFFICES

C. Melvin Frank, Registered Architect, has opened new offices at 185 E. State St., Columbus, Ohio, for the practice of general architecture.

The office also specializes in design of regional shopping centers.

WALKERS STORE FOR LOS ALTOS

A modern major Walker's department store for the Los Altos Shopping Center in East Long Beach has been announced with signing of a 50-year lease by Walker's and Lloyd S. Whaley, Long Beach builder and developer of the project.

Initial plans call for the design and construction of a store building in excess of 100,000 sq. ft., with provisions for an ultimate total area of 150,000 sq. ft.; two stories with a partial third level, plus a basement, representing a total value of some $4,000,000.

Work will start immediately. Welton Becket & Associates, Los Angeles, is the architect.

RESEDA HIGH SCHOOL GROUND BREAKING

Ground breaking ceremonies for the new $4,000,000 Reseda Senior High School were recently observed with prominent school and public officials taking part.

The new facility, designed by the architectural firm of Allison and Rible of Los Angeles, will go far to relieve school room congestion in one of the nation's fastest growing communities and while of contemporary design the new high school building includes a number of features for added safety and convenience. Opening of the unit is scheduled for September.

Included in the project are some 18 buildings on a 32 acre site. Provision is made for 2500 students.

SHOPPING CENTER FOR HAYWARD

Ben Swig and J. D. Weiler of San Francisco have announced plans for the construction of a new shopping center to be built on the East-shore Freeway in Hayward, between Jackson street and Winton avenue.

The project will comprise a department store and group of stores and will cost an estimated $25,000,000.

ARCHITECTURAL FIRM DISSOLVES

The Oakland architectural firm of Confer & Ostwald has announced dissolution of the partnership.

Frederick Confer will continue to do business at the firm's old location in Oakland, while John H. Ostwald will move into new offices in Berkeley.

HIGH SCHOOL BONDS VOTED

Voters of the Lodi Union High School District approved the issuance and sale of school bonds in the amount of $2,300,000 to be used in the construction of a new High School building in Lodi.

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PERSONALITIES

WILLIAM T. WRIGHT
Structural Engineer
Los Angeles, California

William T. Wright, prominent structural engineer of the West Coast, is a member of the Los Angeles Structural Engineering firm of Kistner, Wright and Wright. He received his early education in the Northwest, graduating from the School of Engineering of the University of Washington..

Following a number of activities in the engineering and construction industry, Wright became associated with his present firm in 1933.

Wright is an officer and member of the Board of Directors of the Structural Engineers Association of Southern California and has been active in the organization for many years.

WILLIAM T. WRIGHT
Structural Engineer

Governor Goodwin Knight of California recently appointed Wright a member of the California State Board of Registration for Civil and Professional Engineers, a board which administers California's Civil and Professional Engineers Act and determines the qualifications of persons requesting permission to take examinations for engineering certificates, issuing certificates to those who pass the examinations.

NEXT MONTH: William E. Dreusike, Office Manager, Emeryville, California.

UC STUDENT WINNER OF ENGINEERING CONTEST

Daniel M. Tellep, senior student in mechanical engineering at the Berkeley campus of the University of California, has won the first prize in the annual student papers competition of the Pacific Southwest Region Conference of the American Society of Mechanical Engineers.

This is the second consecutive years the award has gone to a student of the University of California.

Tellep's paper, entitled, "Supersonic Flow Studies by Hydraulic Analogy," was one of many judged against representatives from the Universities of Santa Clara, Utah, Southern California, Stanford, Arizona, and the California Institute of Technology.

BOOTHE RADIANT HEATING ANNOUNCES EXPANDED PROGRAM

Tom W. Boothe, president, has announced formation of the Boothe Radiant Heat, Inc., representing the incorporation of Tom W. Boothe Company, with enlarged services to meet increased sales volume and company activities.

In the new corporation David P. Rhame will have charge of all sales as Sales Manager; F. D. Schrupp will serve as Manager; Doug Honston will serve as San Rafael Branch Manager; and Phillip Hull will be in charge of Engineering. Both Huli and Boothe are graduate mechanical engineers, and Rhame and Honston have a varied engineering background.

TOM W. BOOTHE
President

Boothe made his first radiant heating installation in Lafayette (California) in 1946, and spent the next three years as a general contractor building nothing but radiant heated homes. He completed about one unit a month during this period, and gained a wide and valuable experience in all phases of construction directly and indirectly relating to heating.

In 1949 Boothe started operating exclusively as a radiant heating contractor, and in 1950 the partner-

Architect:
Stanley Fuller Davis

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ship of Boothe-Ainsworth was formed which continued until January of this year when Boothe acquired the Ainsworth interests and the business was conducted solely by Boothe.

The basic policy has been to furnish a complete "package" to the architect and contractor, consisting of design, installation and a guarantee of radiant heat systems together with service to back up such guarantee.

The soundness of this policy has proven correct as with announcement of formation of the new corporation comes the announcement that the Boothe firm will install radiant heating systems in extensive Terra Linda residential development, one of northern California's largest, which is located just north of San Rafael on the Redwood Highway. The Terra Linda project anticipates construction of 1000 homes this year, all with radiant heat, and to serve the work a new branch office of the Boothe firm has been established in the city of San Rafael, in charge of Doug Honston.

Activities of Tom Boothe have not been limited to residential radiant heat systems, as the long list of successful installations made during the past few years include public garages, automobile service agencies, manufacturing plants, banks, motels, ski lodges, churches, schools, firehouses, and hospitals.

A.I.A. ACTIVITIES

(From Page 27)

Architecture"; all taking part.

The Chapter is currently conducting a series of conferences with members of the San Diego County Board of Supervisors to discuss vital phases of the county's building program as it relates to the praetice of architecture.

SOUTHERN CALIFORNIA CHAPTER

A panel comprising W. A. Wiese, Electrical Engineer; Henry Layne, Structural Engineer; Lester R. Kelley, Mechanieal Engineer; and George B. Allison, Architect, discussed a "Symposium on Engineering" at the June meeting, held in the Hollywood Athletic Club Starlite Room.

The panel discussed the services of the consulting engineer to the architect, with Vincent Palmer, architect and Commissioner of the Los Angeles Building and Safety Commission acting as moderator.

PASADENA CHAPTER

A technicolor sound movie highlighting building and technical and design characteristics of Alcoa Building in Pittsburgh, featured the June meeting. Chapter reports and other organization matters completed the program.

New Members: William L. Cowan, Charles Ware, Herb Seiple, and Lyman Ennis.

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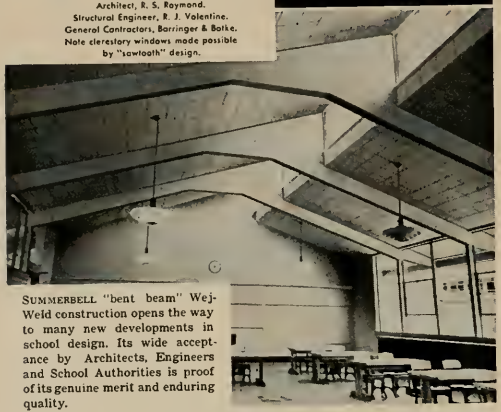

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Structural Engineer, R. J. Valentine.
General Contractors, Barringer & Bolke.
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ARCHITECT MATCHAM RETURNS

Charles O. Matcham, well known Pacific Coast architect and Regional Director of the Sierra-Nevada District of The American Institute of Architects, recently returned to his Southern California home from an extended tour of the Continent where he has been doing extensive research study of exposition buildings.

While in Europe he visited the International Industrial Fair at Milan, and the Royal Festival Hall in London.

AUSTRALIAN ARCHITECTURE

(From Page 15)

their red roofs and corner shops over the brown hills to the south and east.

One of the big reasons Canberra is functioning so smoothly, is that there is only one body which has any real say—the Government Department of the Interior. Canberra is therefore not faced with a multitude of private owners erecting sub-standard dwellings, or placing buildings in unsuitable locations. In this government ownership of practically everything, Canberra is unique amongst Western cities. The Minister, and the Department, of the Interior control Canberra's affairs, although Canberra citizens can express their opinions on civic matters through their representatives on the Australian Capital Territory Advisory Council. The Department owns and builds most of the houses, constructs and maintains Government buildings, controls omnibus transport services, water, sewerage, electricity, parks and gardens, footpaths, roads, and bridges. Canberra tenants can, however, buy their own homes from the Department on easy terms spread over 30 years, if they wish, and many are doing so. There are also about 20 per cent of privately built homes in Canberra, built on 99-year land leases from the Government.

This over-all Government control contrasts strongly with Los Angeles, Bennett said, where the staunchest supporters of the city's planning and development are private business interests.

"Industry and commerce head the planning move-

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ment in Los Angeles," he said. "They realize that unless cities are planned they will stop operating efficiently, and that would be the end of business. It is over 30 years since there was any substantial opposition to town-planning in the United States."

For Australian cities as a whole, the prospect is not nearly as encouraging as for Canberra or Los Angeles. Both Sydney and Melbourne have prepared master plans, which have, as one of their chief aims, elimination of the strangling traffic congestions. In this they could learn much from Los Angeles.

DR. RICHARD EUGENE FULLER

(From Page 5)

Art Exhibit, its program of important national and international exhibitions, and the constant purchase of work from living American artists for the museum collection, Dr. Fuller has greatly stimulated and encouraged the arts in the region. It is widely acknowledged that his influence has been a major factor in the development of the internationally known Northwest School of Painting.

In addition to painting and sculpture, the Seattle Museum constantly features exhibitions of architecture. At the time of the A.I.A.'s Annual Convention in 1953, the entire museum was turned over to showing of architecture and the allied arts.

Born in New York City in 1897, Fuller received a degree of Ph.B. from Yale in 1918; B.S., 1924; M.S., 1925; Ph.D., 1930, from the University of Washington; and in 1944, an LL.D. from Washington State College. He has been a member of the faculty of the University of Washington since 1930, for the past fifteen years as a research professor.

Dr. Fuller is also a well known geologist and is a Fellow of the Geological Society of America, the American Association for the Advancement of Science, the Mineralogical Society of America, and a member of the American Geophysics Union. He is a contributor of articles on geology to scientific journals.

FEMINEERS

(From Page 29)

arship that the FEMINEERS provide each year for an Engineering student at the University of California. The event has been held each year and each event proves more successful than the preceding one.

AMERICAN SOCIETY FOR TESTING MATERIALS

Election of officers for the ensuing year was one of the highlights of the 57th Annual Meeting of the Society held recently in Chicago.

Normal L. Mochel, manager, Metallurgical Engineering for Westinghouse Electric Corpn, Philadelphia, was named President; Rudolph A. Schatzel, vice-president and director of engineering, Rome Cable Corpn, New York, was elected vice-president and directors included Edward J. Albert, president and treasurer, Thwing-Albert Instrument Co, Philadelphia; John M. Campbell, administrative director, Research Laboratories Division, General Motors Corpn, Detroit; Paul V. Garin, engineer of tests, Southern Pacific Co, San Francisco; John H. Jenkins, Chief, Forest Products Laboratories of Canada, Ottawa; and Douglas E. Parsons, Chief, Building Technology Division, National Bureau of Standards, Washington, D. C.

NEWS & COMMENT ON ART

(From Page 4)

United States.

This exhibition presents for the first time under one roof the finest examples of art produced by ancient civilizations which flourished in the Andean region from about 1200 B.C. until the Spanish Conquest in the 16th century. Included are over 200 objects of gold, as well as intricately woven textiles and delicately decorated ceramics. Originally shown early this spring at The Museum of Modern Art in New York, and subsequently at the Minneapolis Institute of Arts.

The Achenbach Foundation for Graphic Arts will show "The Four Seasons of the Gardens", by Crispin van de Passe (c. 1565-1637) and prints by Giovanni

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Battista Piranesi (1720-1777), representing selections from the prisons and views of Rome; and at the Public Library an exhibition of Chinese and Japanese Woodcuts of Flowers and Birds will be shown.

The Motion Picture Series will be shown Saturdays at 2:30 p.m.; and the Organ Program will be given each Saturday and Sunday afternoon.

HEARST MEMORIAL COURT OPENS AT deYOUNG MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, formally opened the William Randolph Hearst Memorial Court on May 25, following the presentation of a celebrated set of four Flemish Gothic Tapestries by the William Randolph Hearst Foundation.

The four tapestries depict in allegorical form the Temptation, Fall and Redemption of Man. The individual subjects being The Divinity, The Fall and the Beginning of the Redemption, The Drama of the Resurrection, and The Crucifixion.

The monumental tapestries were woven in Brussels in the early 16th Century and at one time hung in the Cathedral of Toledo in Spain.

DR. GRACE MORLEY ELECTED HEAD AMERICAN ASSOCIATION MUSEUMS

Members from all parts of the United States attending the annual meeting of the American Association of Art Museum Directors in San Francisco the latter part of May, elected Dr. Grace L. McCann Morley, director of the San Francisco Museum of Art, president of the Association. Wilbur Peat of the John Herron Art Institute, Indianapolis, was elected vice-president, and Mrs. Adelyne Breeskin, director of the Baltimore Museum of Art, was re-elected secretary-treasurer.

WOODWORK INSTITUTE OF CALIFORNIA EXPANDS STAFF

The Woodwork Institute of California has enlarged the scope of its services to the construction industry, and has appointed Les Harter to head a new department of the Institute in the capacity of Technical Consultant.

Harter's duties will be concerned with the activities of coordinating the three "corners" of the woodworking field, as represented by the scientific and technical development, the architect and engineer, and the manufacturing and fabrication phases of the industry. He has been active in the educational field since 1947, serving on the Joint Apprenticeship Committee in Long Beach; on the overall Executive Committee for Apprenticeship Training; on the Safety Committee; and has assisted the National Apprenticeship Committee of the United Brotherhood of Carpenters and Joiners of America in the compilation and publishing of the training program for carpentry.

"The new services offered by the Institute," according to Russel Bjorn, managing-director, "will make available to architects, engineers, contractors, and everyone interested in the construction industry, new knowledge of the uses of wood as they are recorded."

CARNEGIE INSTITUTE AWARDS

The Pittsburgh Chapter, A.I.A., in conjunction with Carnegie Institute of Technology, conducted its Fifth Annual Design Competition recently, awarding first prize to William Bartoli of Pittsburgh. John Kauper, Pittsburgh, won second place and third honor went to Ronald Cassetti of Elmira, New York.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

HEATING, VENTILATING, AIR CONDITIONING GUIDE 1954. American Society of Heating and Ventilating Engineers, 62 Worth St., New York 13, N. Y. Price $10.00

The 1954 Guide, 32nd edition, is now available. Among special features is a new Chapter of Residential Summer Air Conditioning. Included are new data on methods of obtaining local relief in hot humid environments, new information on recent developments in air and gas cleaning, new tables on steam requirements of process equipment, and more detailed data on characteristics of pipe and tube; effect of shading glass. Technical Data Section 1128 pages, an increase of 32 pages; mfg's Catalog Data Section of 486 pages illustrates products of 319 manufacturuers; Edge Index is new feature; chapters brought up to date by major changes include Heating Load, Fuels and Combustion, Chimneys and Draft Calculations, Panel Heating, Pipe, Fittings, Weldings, District Heating, Air Cleaning, Automatic Controls, Electric Heating and Owning and Operating Costs.

ENGINEERING CONTRACTS AND SPECIFICATIONS. By Robert W. Abbett. John Wiley & Sons, Inc., 440 4th Ave., New York 16, N. Y. Price $6.00 (3rd Edition).

A ready reference which will serve as a basic legal guide to the administration of construction work. Contains a clear concise description of the fundamental methods of preparing contracts and specifications, and a useful outline of the applicable principles of law pertinent to engineering and construction.

This 3rd Edition contains new material on engineering and construction law, cost plus fixed fee contracts, construction insurance, bonding practice, contracts for architectural and engineering services, and specification writing—material has been increased about 30% over previous editions.

The approach is strictly that of the professional engineer, and the book includes many of the ways in which U. S. Government contracts' procedure differs from private practice.

GRAPHIC STATICS. By Anthony McF. McSweeney, A.I.A. James H. Barry Co., 170 S. Van Ness Ave., San Francisco 3. Price $9.00

A comprehensive system of diagrams for determining the different kinds of imposed, suspended and external wind load strains supplemented with analyses and mathematical computations is presented by the author for the use of architects, engineers and draftsmen.

Many of the subjects included in this book show figures taken from actual construction and show the progressive steps employed in converting the diagrammatic line values to proper sections and sizes of the material to be used. The formulas and mathematical calculations follow the academic method and all confusing elements are as much as possible eliminated.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Marble for the Home. New brochure in full color showing many applications of the use of Marble in the home; long lasting, economical, easy maintenance. For complete information and free copy write DEPT-A&E, Marble Institute of America, Inc., 108 Forster Ave., Mount Vernon, New York.

Chemonited Forest Products. A new 32-page illustrated booklet telling in illustrated color form the story of BAXCO Chemonited products and the value and varied uses of BAXCO pressure treated structural wood. For free copy write DEPT-A&E, BAXCO-Chemonited Lumber, J. H. Baxter & Co., 200 Bush Street, San Francisco, or 3450 Wilshire Blvd., Los Angeles 5.

Ball valves. Eight page brochure in color on new line of manually operated ball valves; sizes 12" to 48" for shut-off service at pressures up to 150 p.s.i., for water works and industrial applications. Technical section of bulletin concerns "Valve

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CATALOGUES — Available

Characteristics" with sub-sections on closing conditions, tightness of closure, leverage, the operating mechanism, and optional end sections; front view assembly and sectional assembly drawings, with descriptions of standard settings, sectional assembly, and principal parts list. Copies available by writing DEPT-A&E, Valve Division, S. Morgan Smith Co., York 8, Pa.

Toplighting and ventilation. New booklet describes "vent-domes" for homes, institutions, and industry; daylight and ventilation through one roof opening; specifications table, drawings of installations, and other pertinent data. Write DEPT-A&E, Wasco Flashing Co, 89 Fawcett St, Cambridge 38, Mass. for free copy.

Silver-mirrored Permaflectors. A comprehensive catalog has just been issued on Asymmetric Silver-mirrored Permaflectors for show window, perimeter, general and indirect lighting applications of all types; outlines the values of various types of reflecting surfaces so that the user may know the proper reflecting surface to select for obtaining maximum foot-candle efficiency; cross-section drawings give detailed mounting methods for six different assemblies utilizing reflectors to hold 25-watt and 500-watt lamps for recessed or surface mounting. For free copy write DEPT-A&E, Pittsburgh Reflector Co., 487 Oliver Bldg., Pittsburgh 22, Pa.

Hardboard panelings. Uses and advantages of a new striated hardboard paneling is described in two booklets, KALABORD and KALATEX; handy size, two-color; illustrations in color demonstrate effective application, detailed data on advantages and varied applications; booklets describe ease in handling and workability; wearing qualities of surfaces. Copies available by writing DEPT-A&E, Columbia Plywood Co., Skinner Building, Seattle 1, Washington.

Modernization in industrial plants. A 16-page booklet on electrical modernization in industrial plants is now available; "Compete or Collapse" points out that while modernization is the key to successful competition, the first step in any modernization program must be the efficient distribution of electrical power; special section of booklet shows how a modern electrical system can increase output, lower operating cost, reduce down-time and maintenance, and increase safety and reduce safety protective rates; principal elements of a modern electrical system are described and illustrated and advantages outlined. For free copy write DEPT-A&E, Westinghouse Electric Corpn, Box 2099, Pittsburgh 30, Pa.

Pipe and fittings handbook. Just off the press, 304-page general catalog on Seamless Welding Fittings, Forged Flanges, and Forged Steel Fittings; applicable piping codes and standards; dimensions and specifications; easy to use technical data tables including latest data on allowable stress, P/S values and maximum working pressures; valuable tables covering flow through orifices, properties of saturated and superheated steam, friction loss, properties of pipe, pressure-temperature ratings and dimensional tolerances of fittings and flanges. New tabulation of material specifications covering carbon and stainless steel, alloys, aluminum, brass, copper and other non-ferrous metals generally used in piping systems. Indexed for easy use. Free copy by writing DEPT-A&E, Ladish Co, Cudahy, Wis.

Sound products. New 20-page illustrated catalog on sound products; divided into sections dealing with such equipment as microphones, amplifiers, speakers, intercommunications equipment, television Antenaplex systems and unit-built cabinets and racks. Each section in turn presents a list of products designed to meet needs from portable systems to large sound installations; description of each model, special features, uses, specifications, and photographs; many new items such as "Modernphone" and "Duo-Com" intercommunications systems, new portable sound systems, 30 and 50 watt deluxe amplifiers, and custom standard and custom deluxe Antenaplex systems. Copies available by writing DEPT-A&E, Sound Products Section, Radio Corporation of America, Camden, N. J.

Awnings and equipment. New brochure gives detailed data on modern store front operating equipment for all types of canvas or metal awnings; vertical sun-shade curtains for marquees; drawings, products, fabrics, specifications. Free copy write DEPT-A&E, The Astrup Co, 2937 W. 25th St., Cleveland, Ohio.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$12.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks). Per Sack, small quantity (paper) $1.15
Carload lots, in bulk, per bbl. 3.87

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount on L.C.L. 2%

Trinity White, Medusa White, Calaveras White—1 to 100 sacks, $3.60 sack; warehouse or del.; $9.32 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 4-yd. loads:

Per cubic Yard, 1-B Mix	$11.20
1-7 Mix	11.45
1-6 Mix	12.15
1-5 Mix	13.05
Curing Compound, clear, drums, per gal.	1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	.62	.62

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/64 x 2¼	390.00	381.00
33/64 x 2¾	375.00	355.00
33/64 x 3¼	395.00	375.00
33/64 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/64 x 2¼ First Grade	$390.00
33/64 x 2¼ 2nd Grade	365.00
33/64 x 2¼ 2nd & Btr. Grade	375.00
33/64 x 2¼ 3rd Grade	240.00
33/64 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/64 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
7/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
7/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
7/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
7/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 219.00
¾-inch, per M sq. ft. 292.00
Plyscord ..... 11½c per ft.
Plyform ..... 25c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $43.50
Standard Ribbed, ditto $47.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases fort kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (8asis 7¾ lbs. per gal.)		Wholesale Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (8asis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅛"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $13.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
S/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.25
Vented hip skylights, per sq. ft. 2.25
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$290 per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$200.00 per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10
1 ton to 5 tons, deduct 25c.	

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.20 to $1.60 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.35 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼". @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $1.65 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜"... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored 12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red	$ .40	$ .36
12 x 12 x ⅞-inch, plain	.44	.39
6 x 12 x ⅞-inch, plain	.46	.42
6 x 6 x ⅞-inch, plain		

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST B-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 43 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(96)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(13)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 333 Montgomery St., DO 2-3883
Los Angeles 13: 601 West Fifth St., MI 6294

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

CHAPEL AND CONVENT ADD'N, Mission San Jose, Alameda county. Dominican Sisters of Mission San Jose, owner. Reinforced concrete and frame construction, new boiler house — $497,318. ARCHITECT: Arnold & Francis Constable, Sausalito. GENERAL CONTRACTOR: W. R. Kalsched, San Jose.

MEN'S DORMITORY, University of San Francisco, San Francisco. University of San Francisco, owner. 5-story reinforced concrete construction, basement, elevators —$1,300,000. ARCHITECT: GENERAL CONTRACTOR: Barrett Const. Co., San Francisco.

SUNNYBRAE ELEMENTARY SCHOOL, Arcata, Humboldt county. Arcata Elementary School District, Arcata, owner. Frame and stucco construction; 18 classrooms, administration and kindergarten rooms—$357,778. ARCHITECT: Office Frank T. Georgeson, Eureka. GENERAL CONTRACTOR: R. H. Douglas, Fortuna.

MEDICAL BLDG., Wilshire Blvd., Los Angeles. Owner c/o architect. 5-story, steel frame, medical office bldg.; pre-cast facing, composition roofing, concrete floor slabs, steel sash, air conditioning, plaster work, elevator, terrazzo flooring, toilets, electrical work. ARCHITECT: Maurice H. Fleishman, Beverly Hills.

ELEMENTARY SCHOOL BLDG., Fetters Springs, Sonoma county. Flowery Union Elementary School District, Fetters Springs, owner. Frame and stucco Elementary School Building; 4 classrooms, administration, multi-purpose, kitchen and toilet rooms — $209,426. ARCHITECT: C. A. Caulkins, Santa Rosa. GENERAL CONTRACTOR: Glover Bros., Santa Rosa.

OFFICE BLDG., San Mateo. General Petroleum Corpn, San Francisco, owner. 1-story reinforced concrete block and frame construction, some structural steel, asphalt tile floors, acoustical ceilings, air conditioning system; 25,000 sq. ft. of floor area—$320,000. ARCHITECT: Welton Becket, San Francisco. GENERAL CONTRACTOR: Haas & Haynie, San Francisco.

SANCTUARY BLDG., Los Angeles. St. Marks Community Methodist Church, Los Angeles, owner. Frame and stucco sanctuary building, composition shingle roofing, cement, cork and asphalt tile floors, interior plaster, insulation, forced air heating, stone veneer, sheet copper covered tower, exposed wood arches, steel case-

ment. 46 x 92 feet. ARCHITECT: Frick & Frick, Pasadena. GENERAL CONTRACTOR: Ames Const. Co., Inglewood.

COUNTY HOSPITAL, Yerington, Lyon county, Nevada. Lyon County, Yerington, Nevada, owner. 1-story frame and stucco bldg.; provision for 15 beds—$279,000. ARCHITECT: Stone & Mulloy and S. P. Marrachini, San Francisco. GENERAL CONTRACTOR: Nomellini Const. Co., Stockton, California.

SEWAGE TREATMENT PLANT, Milpitas, Santa Clara county. County Sanitation District No. 8, Milpitas, owner. Reinforced concrete construction. ENGINEER: Mark Thomas & Co., San Jose. GENERAL CONTRACTOR: Lew Jones Const. Co., San Jose.

BRANCH PUBLIC LIBRARY, San Diego. City of San Diego, owner. Branch of the Public Library to be built in College Heights; 50 x 90 ft., masonry construction, slab floor—$57,277. ARCHITECT: Earl Giberson, San Diego. GENERAL CONTRACTOR: Teyssier & Teyssier, Chula Vista.

MEDICAL BUILDING, Los Angeles. Dr. O. S. Hansen, Los Angeles, owner. Composition roofing, concrete slab, asphalt tile and cork tile floors; interior plaster work, gas water heater, forced air heating, skylights, toilets, glazed ceramic tile counter tops, water softener, fluorescent lighting, glass block and obscure ripple glass windows, acoustical tile ceilings, 30 x 88 feet—$47,500. ENGINEER: David Witherly, Los Angeles. GENERAL CONTRACTOR: Russell A. Betker, Los Angeles.

RESORT HOTEL, Albuquerque, New Mexico. New Mexico Life Insurance Co., Albuquerque, owner. To be located at the entrance to Tijeras Canyon, east of Albuquerque, a resort hotel of 250 rooms; 4 dining rooms, banquet hall to seat 400; estimated cost $3,000,000. ARCHITECT:

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreemant between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	3.00	3.00	3.00	3.00	3.00
REINF. STEEL	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

*6 Hour Day. **7 Hour Day. *** Before C.I.S.C for 15c increase.

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YOUNG ARCHITECT seeks permanent association in Bay Area. A.I.A., N.C.A.R.B., M. Arch. M.I.T., B.S. Univ. of Illinois, Designer with engineering background, winner in national competition, 12 years varied experience and private practice. Reply, Box 526, Architect & Engineer, Inc., 68 Post St., San Francisco 3, California.

Charles S. Dilbeck and Associates, Dallas, Texas. GENERAL CONTRACTOR: Lembke, Clough and King, Albuquerque, New Mexico.

SHOPPING CENTER, Sunland, Los Angeles county. Shopping Bag Food Stores, Hawthorne, owner. Reinforced concrete and masonry shopping center, composition roofing, concrete slab, plate glass, electrical work, plumbing, steel sash, asphalt paving; also 8 store buildings — $500,000. ARCHITECT: H. W. Underhill, Los Angeles. GENERAL CONTRACTOR: Hahn St. John, Hawthorne.

OFFICE BLDG., San Jose, Santa Clara county. Donnell E. Jaekle, San Jose, owner. 2-story frame and stucco construction; 10,000 sq. ft. of floor space—$67,300. ARCHITECT: Donnell E. Jaekle & Donald S. French, Associates, San Jose. GENERAL CONTRACTOR: M. L. Blanchfield, San Jose.

MEDICAL - DENTAL BLDG., Sanger, Fresno county. Dr. James A. Giovachinni, c/o architect, owner. Complete facilities for professional services building, air conditioning, heating—$54,425. ARCHITECT: Horn & Mortland, Fresno. GENERAL CONTRACTOR: H. E. Graham, Sanger.

AIR NATIONAL GUARD FACILITIES, Reno, Nevada. Corps of Engineers, U. S. Army, San Francisco, owner. Paving, lighting and improvements to Hubbard Field at Reno, Nevada, for the Air National Guard, $1,313,182. GENERAL CONTRACTOR: Isbell Construction Co., Reno.

SWIMMING & TENNIS CLUB, Southland Park Terrace, Sacramento county. Park Terrace Swimming & Tennis Club, Sacramento, owner. 1-story, concrete and block and frame construction, steel sash, air conditioning, steel and glass sliding doors; swimming pool is gunite and concrete; concrete terraces, $91,540. ARCHITECT: Rickey & Brooks, Sacramento. GENERAL CONTRACTOR: Continental Const. Co., Sacramento.

SCHOOL AUDITORIUM, Riverside High School. Riverside City School District, Riverside, owner. Excavating, reinforced concrete, brick work, hollow concrete masonry, composition roofing, sheet metal, structural steel, steel sash, metal lath and plaster, hardware, aluminum doors and trim, thermal insulation, electrical, plumbing, heating and ventilating, acoustical, terrazza, asphalt tile, metal toilet partitions and shower cabinets, automatic fire doors, stage rigging and draperies, equipment and furnishings, 629,450. ARCHITECT: Ralph C. Flewelling and Walter L. Moody, Los Angeles. GENERAL CONTRACTOR: Baruch Corpn, Los Angeles.

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SHOP BLDG., Sunset School, Fresno county. Coalinga Union Elementary School District, Coalinga, owner. 1-story steel frame and concrete panel walls, concrete floors, composition roofing, 7000 sq. ft. floor space, $103,000. ARCHITECT: Horn and Mortland, Fresno. GENERAL CONTRACTOR: Remco Const. Co., Avenal.

DENTAL CLINIC, Park Air Force Base, Alameda county. Corps Engineers, U. S. Army, San Francisco, owner. 1-story wood frame, 7,000 sq. ft. floor area, related utilities, paving, $131,395. GENERAL CONTRACTOR: Bay Cities Const. Co., Oakland.

UNION HALL, Hayward, Alameda county. Cannery Workers Union, Local 768, Hayward, owner. 1-story with basement, frame and stucco, some structural steel, composition roofing, some brick veneer, 7,500 sq. ft. floor area, $72,251. ARCHITECT: Wahanaki & Cory, Hayward. GENERAL CONTRACTOR: John F. Burns, Hayward.

LAB BLDGS., Livermore, Alameda county. Atomic Energy Commission, Engineering Division, San Francisco, owner. 3 buildings comprising laboratories, shop offices; 40,000 sq. ft. floor space, reinforced concrete floor slab, structural steel frame, 8-inch concrete block walls, poured gypsum roof, air conditioning, heating and ventilating, electrical work, utilities, $489,800. GENERAL CONTRACTOR: Carlray Co., San Carlos.

MOBILE CAMP SITE, Las Cruces, New Mexico. Corps of Engineers, U. S. Army, Albuquerque, owner. Contract awarded for construction of a mobile camp site at a cost of $347,729. GENERAL CONTRACTOR: Denton & George, Clovis, New Mexico.

MEMORIAL HALL, Terra Bella, Tulare county. County of Tulare, Visalia, owner. Reinforced concrete and brick construction, structural steel, concrete slab floor, composition roofing, $105,300. ARCHITECT: R. C. Kaestner, Visalia. GENERAL CONTRACTOR: Lindquist & Lindquist, Visalia.

AIROJET PLANT, Nimbus, Sacramento county. Aerojet-General Corp., Nimbus, owner. 4 buildings, 10,000 sq. ft., and 4 buildings of 12,000 sq. ft., each; structural steel frame, concrete floors, composition walls and roof, fire protection facilities, $644,586. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

STORE BLDG., Mt. View, Santa Clara county. Albert and Lawrence Armanini, Sunnyvale, owner. 1-story and part mezzanine, concrete tilt-up, wood roof, brick and plate glass front, 90x125 ft., $82,528. STRUCTURAL ENGINEER: George Washington, San Francisco. GENERAL CONTRACTOR: O. E. Anderson, San Jose.

SALVATION ARMY BLDG., Reno, Nevada. Salvation Army, Reno, owner. 1-story and basement, concrete block and frame construction, $54,990. ARCHITECT: De Lonchamps & O'Brien, Reno. GENERAL CONTRACTOR: Robert P. Beeks, Reno.

ELEMENTARY SCHOOL, Livermore, Alameda county. Livermore Elementary School District, Livermore, owner. Frame and stucco construction, 9 class rooms, multi-purpose rooms, 3 special classrooms, and toilet rooms, $331,345. ARCHITECT: John C. Warnecke, San Francisco. GENERAL CONTRACTOR: John E. Branagh, Piedmont.

MEDICAL BLDG., San Leandro, Alameda county. Owner, c/o architect. Two-story, plus basement, frame and stucco construction with aluminum sash, asphalt tile floors, acoustical tile ceilings, some brick work, $221,496. ARCHITECT: Reynolds & Chamberlain, Oakland. GENERAL CONTRACTOR: F. P. Lathrop Construction Co., Berkeley.

AIRCRAFT HANGAR, Fresno. National Guard Bureau, U. S. Properties & Disbursement Office, Sacramento, owner. Construction of aircraft hangars and other buildings at Hammer Field near Fresno, $804,553. GENERAL CONTRACTOR: Clarence Ward Const. Co., Fresno.

WAREHOUSE, Oakland, Alameda county. Howard Terminals, Oakland, owner. 1-story reinforced concrete, wood roof and trusses, concrete floors, 41,000 sq. ft. $141,124. STRUCTURAL ENGINEER: J. Y. Long Co., Oakland. GENERAL CONTRACTOR: Van Bokkelen-Cole Co., Oakland.

HALL OF RECORDS, Fresno. County of Fresno, Fresno, owner. Reinforced concrete construction, courthouse annex of 22,000 sq. ft. of floor space, $537,201. ARCHITECT: Coates & Metz., Fresno. GENERAL CONTRACTOR: Harris Const. Co., Fresno.

ENGINEERING BLDG., Santa Rosa Junior College, Sonoma county. Santa Rosa Junior College, Santa Rosa, owner. 1-story frame and stucco, concrete floors, radiant heating, steel sash, composition roof, $190,793. ARCHITECT: J. Clarence Felciano, Santa Rosa. GENERAL CONTRACTOR: Robert R. Todd, Santa Rosa.

WIND TUNNEL, International Airport, Los Angeles county. North American Aviation, Inc., Los Angeles, owner. Negotiated contract has been awarded for the design, engineering and construction of tunnel's structure near the Los Angeles International Airport, $4,000,000. GENERAL CONTRACTOR: Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

MAINTENANCE HANGAR, Mather Field, Sacramento County. Corps U. S. Engineers, U. S. Army, Sacramento, owner. Double cantilever maintenance hangars: 250 x 350 ft.; 1 story 24 x 66 ft. masonry deluge pump building with 500,000 gal. reservoir; paving, electrical work, and utilities, $1,864,699. GENERAL CONTRACTOR: Bayshore Const. Co., Berkeley.

CITY HALL BLDG., Petaluma, Sonoma county. City of Petaluma, owner. 1-story reinforced concrete, structural steel frame, aluminum sash, asphalt tile floors, basement—$220,892. ARCHITECT: J. Clar-

ence Felciano, Santa Rosa. GENERAL CONTRACTOR: B & R Const. Co., San Francisco.

HIGH SCHOOL ADDN., Roseville, Placer county. Roseville Joint Union High School District, Roseville, owner. Reinforced concrete and frame construction, rigid steel bents — $337,500. ARCHITECT: Gordon Stafford, Sacramento. GENERAL CONTRACTOR: Floyd G. Borchardt, Stockton.

LIBRARY AND MUSEUM, Tucson, Arizona. Arizona Pioneer's Historical Society, University Stadium Bldg., Tucson, owner. Combination library and museum building — $178,635. ARCHITECT: Joseph H. Joessler, Tucson. GENERAL CONTRACTOR: M. M. Sundt Const. Co., Tucson.

IN THE NEWS

LAS VEGAS BUILDS SHOPPING CENTER

Work has commenced on the new Fremont Center, between 11th and 12th, Las Vegas' newest complete shopping center.

The building will be of concrete block, composition roof, concrete and asphalt tile flooring, air conditioning, steel sash, steel roof trusses, and will cost an estimated $2,500,000, according to Mike Terizzi, president of the Fremont Center Corpn.

ADDITIONS TO BURBANK SCHOOL

The Burbank Board of Education is completing plans for the construction of an addition to the Central Elementary School which will add classroom and multi-purpose facilities to the present building.

An estimated 6160 sq. ft. of space will be added at a cost of $80,000.

COUNTY HOSPITAL ADDITION

The Board of Supervisors of the County of Sonoma recently approved plans for the construction of a new 99-bed addition to the County Hospital building.

The new wing, for chronic cases, will be a 2-story reinforced concrete building; hydraulic elevator, asphalt tile floors, steel sash; will contain about 40,000 sq. ft. and cost $679,183.

Plans for the project were prepared by the architectural firm of Stone & Mulloy and S. P. Marraccini, San Francisco.

MASONIC TEMPLE FOR LOS ANGELES

Plans have been completed for the construction of a frame and stucco Masonic Temple at 3929 Santa Rosalia Drive, Los Angeles, for the Crenshaw Masonic Temple Association.

The new building will be 59 x 119 feet in area; concrete slab and asphalt tile floors, steel sash, forced air heating, suspended gas heater, toilets, acoustic ceilings; kitchen facilities, banquet, lodge and recreation rooms. Estimated cost—$35,000.

Edward Escalle, Los Angeles, is the engineer.

NATIONAL GUARD AIR FACILITIES

The Corps of Engineers, U. S. Army, San Francisco, announced paving, drainage and lighting work on the new Air National Guard facilities at Hubbard Field near Reno, Nevada, will soon be under way.

Cost of the improvements will run in excess of $1,263,700.

DEMO ELECTRIC HAMMER

A new type electric hammer that delivers 6000 blows per minute and rotates at 1000 r.p.m., weighs only 9½ lbs., and will drill up to 6 times faster than any tool of comparable size.

Accurate holes from 3/16" to 1½" and this new tool is recommended for heavy duty work in roughing-in through concrete, hard rock, and wood for all types of plumbing, heating, electrical, air conditioning and general contracting. No more than 25 pounds of pressure is required in drilling, thus eliminated is operator fatigue; equipped with sintered carbide core bits, adapters and extensions. Full information and price (Bulletin 117) DAVRUS CORPN, Box 1221, Joliet, Ill.

ARCHITECT OPENS OFFICE

Robert George Muncaster, architect, recently announced the opening of offices in the Sampson Building, 75 Malaga Cove Plaza, Palos Verdes Estates, California.

He will engage in the general practice of architecture.

SHOEMAKER APPOINTED FIELD REPRESENTATIVE

J. H. Shoemaker has been appointed field sales representative for the General

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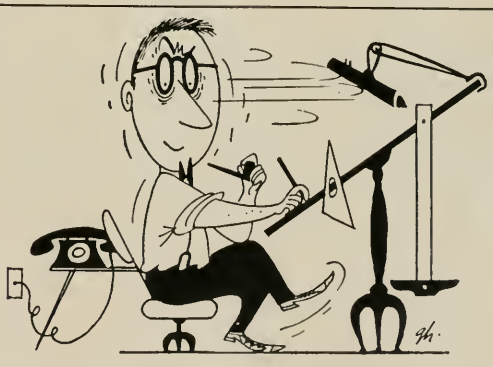

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Electric Air Conditioning Division's western region, according to a recent announcement by W. D. Paulsen, western regional manager with headquarters in Los Angeles.

Shoemaker will represent the firm in home heating and cooling equipment in California (except Los Angeles), Arizona and Nevada, and will maintain offices in San Francisco.

SHOPPING CENTER
FOR CLAIREMONT

Contracts for the first two buildings have been accepted and work started by the Nielsen Construction Co. of San Diego, on construction of The Quad shopping center in Clairemont, community development project near San Diego.

Architects Harold Abrams of La Jolla, and Earl F. Giberson, San Diego, designed the buildings.

ARCHITECT
SELECTED

The Housing Authority of the City and County of San Francisco has commissioned the architectural firm of Ward & Bolles, San Francisco, to design an annex to the Ping Yuen housing project, one of the most colorful housing projects developed in the City of San Francisco.

NEW TYPE
FLOORING

Resemble concrete, trowels like concrete, almost 100% waterproof, resists acids and alkalies, has undergone several years of test applications, DEX-O-TEX is now available on the national market.

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Service performance data, colors, uses and other information available from Crossfield Products Corpn, Los Angeles 21, or Roselle Park, New Jersey.

MOSAIC TILE NAMES
HAROLD W. STEVENS

Harold W. Stevens has been appointed to the Mosaic Tile Company's El Segundo staff, according to a recent announcement by Thomas B. Jordan, western manager of the firm.

Stevens, a practical helper, tile setter, estimator and contractor, will call upon tile contractors and architects in the southwest area.

BLOOD BANK AND
OFFICE BUILDING

The San Francisco Medical Society will construct a 2-story reinforced concrete building, with basement and steel roof trusses and steel decking, on the corner of Masonic avenue and Turk street in San Francisco at an estimated cost of $462,000.

The new building will be used as a combination office building and blood bank. W. G. Merchant, San Francisco, is the architect.

ROOF VALVE AIDS
IN FIGHTING FIRE

A roof unit for industrial buildings which opens quickly when excess interior heat occurs, called a "fire valve" has been developed to meet a recognized need for fast release of heat, gases and smoke in the event of fire.

Each unit provides 46 sq. ft. of free area opening when two large dampers drop, released by a fusible link device. Damper can also be opened and closed by a loop chain when desirable to use for ventilation; weatherproof when closed. Manufactured and complete data from SWARTWOUT CO., Cleveland, Ohio.

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neering Section of the General Electric Company's Silicone Products Depot has been announced by Dr. Edward A. Kern, manager.

Dr. Robert O. Sauer was named manager of this unit.

ARCHITECT SELECTED

Robert N. Eddy, architect, Bakersfield, has been commissioned by the Kern county Board of Supervisors to design and prepare specifications for the construction of a new Veterans' Memorial Building to be built as a part of a new Civic Center development project.

SCHOOL BONDS APPROVED

Electors of the Palo Alto Unified School District recently approved the issuance of $5,000,000 in school bonds with funds to be used for the construction of a new high school, a new junior high school building and additions to existing school buildings.

LANDSCAPE ARCHITECTS

John A. Manchester and Donn Pierce have opened offices at 680 Sutter street in San Francisco, where they will conduct a general practice in landscape architecture.

Manchester and Pierce were formerly located in Seattle, Washington.

SANTA BARBARA SCIENCE BUILDING

A new $1,200,000 science building of the University of California, Santa Barbara College, has been accepted by university officials, marking the completion of the second permanent structure on the new 408-acre seashore campus, to which the college will move for the opening of the fall semester.

The two-story science building incorporates the latest design and facilities for scientific teaching and research and in addition to the many general and specialized laboratories, there is a large lecture demonstration auditorium. Offices for the faculty scientists also include small individual laboratories for research.

The new Santa Barbara College site is located ten miles north of Santa Barbara on an elevated mesa overlooking the ocean.

NEW ADHESIVE MAKES TILE INSTALLATION FASTER

A big step ahead in faster, better and lower cost installation of clay tile has been announced by the Adhesives and Coatings Division of the Minnesota Mining and Mfg. Company.

The development results from a new ceramic tile adhesive; tan colored, synthetic rubber, ready for use when taken from container. By using notched trowel, coverage is 60 to 70 sq. ft. per gal., and 1 lb. of adhesive will do the work of 40 lbs. of wet mortar.

Tile can be set over any sound wall surface, remodeling or new construction; fast drying—36 hours. Complete information available from mfg., 423 Piquette Ave., Detroit 2, Mich.

SCHOOL BONDS APPROVED

Voters of the South Pasadena Unified School District recently approved a proposal to issue and sell $1,645,000 school bonds to finance the construction and repairs to South Pasadena school buildings.

MORTUARY BUILDING

The architectural firm of Rickey & Brooks, Sacramento, is preparing draw-

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ings for the construction of a new mortuary building for the Sacramento Memorial Lawn Association. The building will be of frame and stucco with laminated wood roof arches and will cost an estimated $200,000.

ARCHITECT SELECTED

The Stockton Unified School District has commissioned architect Victor Galbraith of Stockton, to design and prepare specifications for the construction of an addition to the Cleveland Elementary School in Stockton.

The addition will include multi-purpose rooms and a kitchen building.

FRANK SLEETER IS NOW VICE PRESIDENT

Frank Sleeter has been elected vice president, Facilities Administration, Radio Corpn of America, according to an announcement by Brig. General David Sarnoff, Chairman of the Board.

Sleeter has been serving as Plant Facilities Administration director and prior to that was director of Plant Engineering.

SCHOOL BONDS APPROVED

Voters of the Glendale Unified School District of Glendale, Arizona, approved a proposal to issue and sell school bonds in the amount of $1,300,000 to enlarge the Glendale and Sunnyslope High Schools, and to build a new high school in the Washington district.

LOS ANGELES SELECTS ARCHITECTS FOR WORK

The Los Angeles County Board of Supervisors recently appointed architects Austin, Field & Fry; J. E. Stanton; Adrian Wilson, and Paul R. Williams as architects for the new County Administrative Building, to be located in the Civic Center.

CIVIC CENTER AUDITORIUM

Voters of the City of Los Angeles will vote June 8th on a bond issue of $19,500,000 with funds to be used for the construction of a Civic Auditorium Center in the area bounded by Figueroa St., on the west, and Fremont on the north, and between 3rd and 5th Streets.

CHURCH ADDITION

The First Baptist Church of Sacramento is adding a new Chapel, office and classroom facilities to the building in Sacramento.

Cost of the project is $140,000. Chas. F. Dean, Sacramento, is the architect.

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This handsome small office building, designed by Architect Walter Wagner, makes good use of standard adhesion-type Ceramic Veneer. Located in Merced, California, it was built by Trewhitt-Shields and Fisher.

Architects Claud Beelman and Herman Spackler used light green adhesion-type Ceramic Veneer as the main facing material on the new Security-First National Bank in Beverly Hills, California. Contractor: C. W. Driver, Inc.

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COVER PICTURE

Aerial View
NORTHGATE COMMUNITY
Seattle, Washington

Howard S. Wright & Co., Contractors

Residential area which surrounds the elaborate "Northgate Shopping Center" of suburban Seattle, designed by John Graham & Co., Architects and Engineers, and owned and developed by Northgate Corp.

See Page 12 for details and story on "What Makes a Shopping Center Successful".

Photo by Martin Moyer

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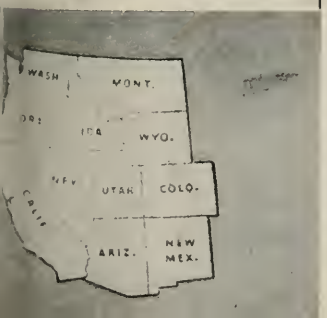

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. EDITORIAL NOTES .

FEDERAL CONSTRUCTION ACT

Professional groups and the construction industry as a whole can well afford to give serious consideration to the recent legislation before the United States Congress which was introduced for the purpose of eliminating the so-called practice of "bid-shopping" on Federal Public Works Projects, as this effort again represents a dangerous trend of government to encroach in the field of free enterprise.

"Bid-shopping" is a practice familiar to everyone connected with the construction industry, and probably a phrase totally unknown to most people who devote their time and energy to other fields of endeavor. Its practice is actually far less prevalent than the spotlight of attention which has been focused upon it would indicate. However, here is a proposal that members of Congress, many of whom have no knowledge of the construction industry and its intricate ramifications, enact Federal legislation to "control" a small phase of a tremendously large industry.

Experience has proven in a number of previous instances where laws have been enacted to "control" a minority that the objective is not thus obtained, and there is every reason to expect that such would be the net result in this instance.

There is no actual need for Federal laws to "police" a few, but there is a very definite need for the leaders of the construction industry to get together and correct by co-operation the practice of "bid-shopping."

One of the great organizations in the construction industry, the Bishop, Younger, Bradley Company of San Francisco, recently bought full page advertising space to point out, among a number of important facts, that "Basically, it's a matter of ethics. Either we look to our own conduct or we face the alternative of having our conduct looked after by the government."

The situation could not be more clearly stated, and the principle applies to a lot more activities than just the construction industry—either WE do or THEY do.

* * *

"Faith in people is a primary reason for America's success."
—Richard L. Bouditch, President, U. S. Chamber of Commerce.

• • •

SOUND MONEY

In late June the Federal Reserve Board again reduced reserve requirements of member banks, thus continuing to maintain "active ease" in the money market.

Monetary policy has been once again playing its traditional balance wheel role in the economy since the famous Federal Reserve-Treasury Accord of March 1951. Skillful use of open market operations, rediscount rate and reserve requirements has been notable over the last 18 months. In early 1953 the Federal Reserve acted to control inflation and since the turn of the cycle in the middle of that year, has been consciously supporting expansion.

In January 1953, the Federal Reserve discount rate was raised from 1¾ to 2 per cent. At the same time, the Federal Reserve sold government securities in the open market, thus absorbing reserve funds of the banks. As the inflationary threat ended in the Spring of 1953, the System began to supply reserve funds to the money market by purchasing government securities in May and June, and reducing reserve requirements in July. In the first half of 1954 as the economy continued to move down from the Korean War superboom peak, the Federal Reserve reduced the discount rate, continued open market purchases of government securities, and again reduced the reserve requirements of member banks.

Developments of the last year-and-a-half clearly reflect a **sound** money policy. A sound money policy requires of the monetary authorities the will, courage and ability to choke off inflation. Such action, in turn, gives them elbow room for counter action when the cycle turns. The flexible management of our monetary system by the Federal Reserve since March 1951 gives much hope for the future stability of the American economy.

* * *

Every 15 seconds someone is injured and every 14 minutes someone is killed in an automobile accident in the U. S.

* * *

ARCHITECT AND ENGINEER ALWAYS SERVES PROFESSION

July 7, 1954

Editor
Architect and Engineer
68 Post Street
San Francisco 4, California

Dear Sir:

On my return from the Annual Convention of The American Institute of Architects in Boston, I found in my office a copy of the June "Architect and Engineer," in which you have given a page to our Southwest Washington Chapter, A.I.A.

I wish to thank you for being so generous with the publicity and for having inserted the Chapter listing under the heading of The American Institute of Architects on page 27.

I would like very much to have six extra copies of the June issue. Please bill me directly for these.

Sincerely,

Southwest Washington Chapter, A.I.A.
By Nelson J. Morrison, President

Porcelain ENAMEL VENEER

FLOOD BUILDING *Powell and Market Streets, San Francisco, where the picturesque Powell Street Cable Car is reversed for its return journey up famed Nob Hill*

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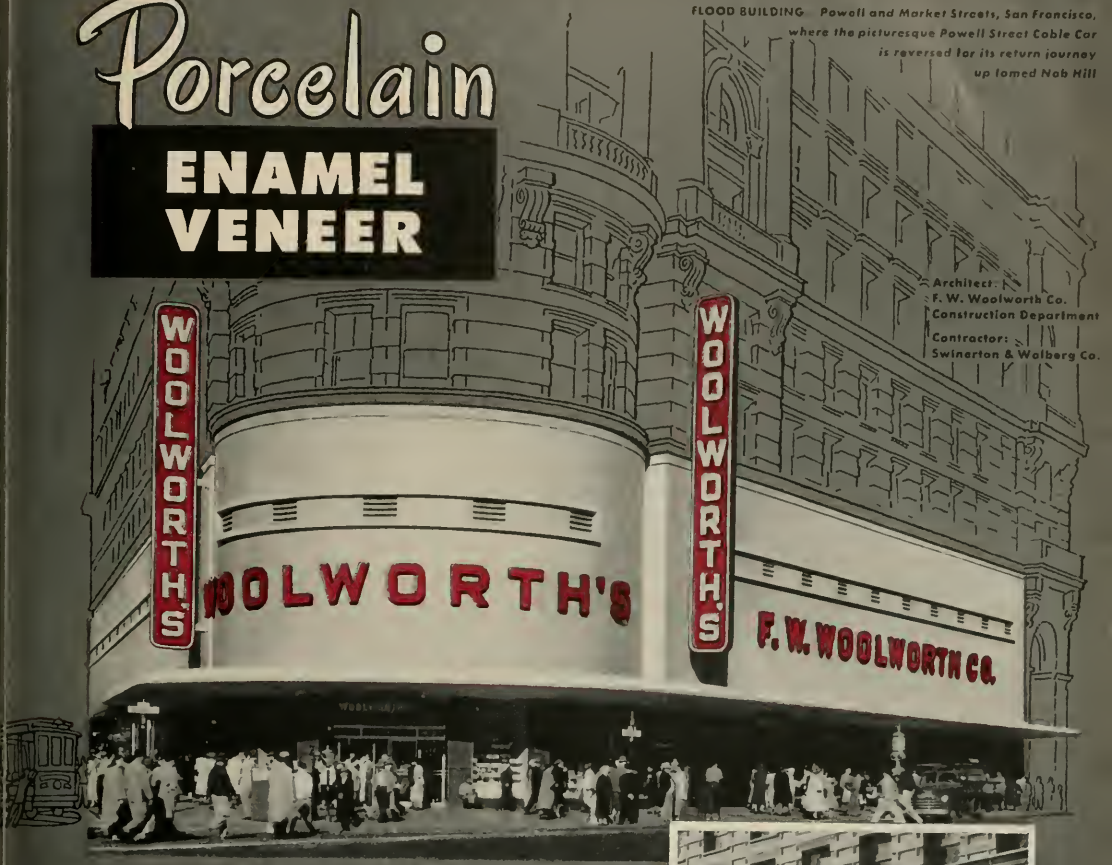

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NEWS and COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., will feature an exhibition of "Ancient Arts of the Andes" which is a sponsored event for the benefit of The California School of Fine arts.

The exhibit shows more than 400 priceless objects from private and public collections in South America, Europe, Canada and the United States, representing the finest examples of art produced by ancient civilizations which flourished in the Andean region from about 1200 B.C. until the Spanish Conquest in the 16th century. Many items of rare gold, intricately woven textiles and delicately decorated ceramics are included. The exhibition was previously shown at The Museum of Modern Art in New York City, and at the Minneapolis Institute of Arts.

Other special exhibitions include: paintings by Brian Connelly; Young American Printmakers, lent by the Museum of Modern Art, New York; and Fifteen Mysteries of the Rosary. The Achenbach Foundation for Graphic Arts will feature prints by Giovanni Battista Piranesi (1720-1778), a group of selections from the prisons and views of Rome; and on loan exhibition at the San Francisco Public Library will be a group of Chinese and Japanese woodcuts of flowers

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park
San Francisco

SECRETARY

Made for Marie Antoinette
by the ebeniste Jean-Henri Riesener

French, Late 18th century

Roscoe and Margaret Oakes Collection

and birds.

The summer painting classes for children will be held each Tuesday and Thursday morning; and an introductory class for adults will be held on Saturday afternoon. Organ music Saturday and Sunday afternoon; and the motion picture series complete the scheduled program.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, offers a July schedule of special exhibitions and events that will appeal to many visitors.

Among the special exhibits will be a "World War II Paintings and Drawings", by George Biddle; "Chinese Gold and Silver" from the collection of Dr. Carl Kempe of Stockholm, and representing objects from about 400 B.C. to 1900; "Masterpieces of Pre-Columbian Gold"; "Impressionism in American Art"; Drake and Elizabethan Exhibition, sponsored by The Drake Navigators Guild commemorating the 375th Anniversary of the arrival of Sir Francis Drake at Drake's Bay—1579; and Clay for Today, the 8th Annual Exhibition of the Association of San Francisco Potters.

Special events scheduled for the month include: Classes in Art Enjoyment for Adults divided into the following groups: "Painting for Pleasure, Exercises in Perception," a course offering an opportunity, by learning to paint, to develop a more active enjoyment of art and of all visual experience. It consists of lectures, demonstrations and class experiments in drawing which analyzes the way our vision operates. "Seminars in the History of Art", "Painting Workshop", and children's classes in "Picture Making", "Art and Nature," and the "Art Club". Permanent exhibitions are also offered in the field of fine and applied arts.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Walter Heil, is offering the following special exhibits and events for July:

EXHIBITIONS: Raoul Dufy Memorial Exhibition; 18th Annual Drawing and Print Exhibition of the San Francisco Art Association; Recent Paintings by Rufino Tamayo; Contemporary Japanese Prints, and continuing the Designer-Craftsmen, USA, 1953 exhibition.

SPECIAL EVENTS: In association with the Mills College, the Summer Concerts of Chamber Music will present three concerts in July. Members of the Quartet include Josef Roisman and Jac Gorodetsky, violins; Boris Kroyt, viola; and Mischa Schneider, violoncello. Lecture tours of the Museum are held each Sunday afternoon, with gallery tours each Wednesday evening. Classes in Art for the Layman, Adventures in Drawing and Painting, and the children's Saturday morning art classes have recessed for the summer and will be resumed in September.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an exhibition of paintings, "Mexican Compositions," by Hal Goldman; "Seascapes," by William R. Davis, and "Watercolors," by Samuel Provenzano, during July.

A grouping of American, English, French lithographs and silkscreen prints will be shown in the Little Gallery, and Rotunda Gallery on the Fourth Floor.

18th ANNUAL DRAWING AND PRINT EXHIBITION OF SF ART ASSOCIATION

The 18th Annual Drawing and Print Exhibition of the San Francisco Art Association is being presented this month at the San Francisco Museum of Art, War Memorial Building, Civic Center.

Ninety-one entries were selected for this year's exhibition from six hundred and forty-five submitted to the jury, comprising: Paul Mills, chairman; Nancy Genn, Glenn Wessels, Mary Navratil, and Gerry Opper. Edward Hagedorn served as alternate.

First prize was given to Emiko Nakano; Warrington Colescott was awarded second; Karl Kasten, third, and Art Holman and Jean Kubota Cassill received fourth and fifth awards. Jean Cushman and J. De Feo were given Honorable Mention.

R. M. SCHINDLER EXHIBIT BALBOA PARK, SAN DIEGO

The Fine Arts Gallery of San Diego is exhibiting the works of Rudolf M. Schindler in Balboa Park during the month of August.

Schindler came to this country in 1913 where he studied architecture under Architect Frank Lloyd Wright. He entered the private practice of architecture in 1922, opening offices in Los Angeles and La Jolla, where he later died.

The Women's Architectural League of San Diego served a tea in conjunction with the exhibit.

NEW ACQUISITIONS AT THE deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, announces the addition of two pieces of furniture, a commode and a secretary, to the Roscoe and Margaret Oaks Collection. Both pieces were made the latter part of the 18th Century by the French cabinetmaker, Jean Henri Riesener, for

(See Page 27)

With colorful CLAY BRICK *...inside or outside...* ONE WALL DOES IT ALL

ABOVE—Appleton & Wolfard, Architects have blended Clay Brick with the landscape in creating an ideal outdoor setting at Parkside Library.

AT LEFT—Inside, colorful Clay Brick scores again with an outstanding achievement in indirect lighting.

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Prepared by Architect
WILLIAM LESCAZE, F.A.I.A.*

PREFACE

This summary of the design recommendations for Porcelain Enamel Curtain Walls is based upon the research and investigation of William Lescaze, F.A.I.A. Architect, as told in his report, "Porcelain Enamel Curtain Wall Research for the Porcelain Enamel Institute, Report Number 3—Step II."

Three years ago, Architect Lescaze was commissioned by the Curtain Wall Committee of the Porcelain Enamel Institute to investigate the requirements for Porcelain Enamel Curtain Walls and to develop recommended designs.

This summary, while not comprising a complete treatise on the subject, does set forth certain major considerations, criteria, and requirements of importance in the design of a Curtain Wall system.

DEFINITION OF CURTAIN WALL

Mr. Lescaze defines a curtain wall as follows:

"A curtain wall may be defined as an exterior wall which is non-load-bearing and is supported at each floor by the structural framework of the building.

"The conventional brick and masonry walls used in steel or concrete framed buildings are curtain walls also but these present certain inherent disadvantages, viz. great weight, considerable thickness, low insulating value, etc."

The new concept of curtain wall construction that is now creating widespread interest in the architectural and building fields is based on a number of factors.

In recent years intensive research by industry has resulted in improved building products having better qualities for meeting the essential engineering requirements of efficient wall construction. Adaptation of these new materials to modern building design is pointing the way to wider use of curtain walls.

The pressure of economic factors such as high material and labor prices, material scarcities, etc. has led to study by all branches of the industry of methods to reduce costs. The logical result of such thinking was to turn to the mass-production techniques that have been so successfully used to lower costs in the automotive, durable goods and other industries.

The education of the architect himself in recent years has tended toward freedom from the restrictions of the past. Today, in seeking new expression for his ideas he has found almost unlimited opportunity through the use of metal.

Recognition of these new developments has helped to convince Building Code administrative officials of the need for revising obsolete code provisions that stand in the path of progress.

In designing a metal curtain wall to replace the masonry type, the following features appear to be those that can be set up as desirable criteria (report No. 3).

A curtain wall should be:

1. Light in weight;
2. Thinner than masonry;
3. Made in prefabricated units—as large as practicable;
4. Of adequate strength, durability and weather resistance;
5. Of adequate fire rating*;
6. Of greater insulating value than conventional wall;
7. Designed for inside placing;
8. Low in cost.

* For curtain wall on multi-story buildings in urban areas a 2-hour fire rating would be required. Walls with this rating are now permitted by the Building Codes in many large cities, notably New York, Chicago, Pittsburgh, etc. However, development of a curtain wall with a lower fire rating should not be neglected.

Criteria 3 to 6 inclusive and Criteria 8 need no comments. Criteria 1 is desirable as it not only lowers transportation costs and facilitates ease of erection, but also will produce savings by reducing the basic tonnage of the frame of the building. Criteria 2 will produce additional revenue, since as much as 7″ of usable rentable space might be gained around the whole perimeter of the building, the equivalent of 1 square foot for every 20 linear inches of exterior wall. Criteria 7 will lower erection costs since scaffolding will be unnecessary.

NOTE: Three years ago a special committee of the Porcelain Enamel Institute, Inc., was formed to study the subject of Porcelain Enamel curtain walls. The above summarized report is the result of extensive study by the noted Architect William Lescaze, commissioned by the Curtain Wall Committee for the Research Project. Ed.

MAJOR CONSIDERATIONS

(A) Prefabrication of panels. While there are a number of ways available to the designer in detailing the prefabricated metal panels, the need for conforming to factory-controlled conditions must be kept in mind. Close cooperation and consultation with the porcelain enameler on the part of the designer is essential before the final design is given approval for production.

(B) Secondary framework. A curtain wall must necessarily be linked with one or more assumed types of structural building frames. The relationship and attachment of the panel system to the building frame is the primary function of the secondary framework. It must be simple, flexible and adaptable to all types of building frames.

(C) Joints. Vertical and horizontal jointing between panel and structural elements, between panel and panel, horizontally and vertically, and between panel and door, panel and window, etc. will be influenced by the characteristics of the building and the detail of the panel. Conditions at the coping and base of the building must be studied carefully.

The problem of a workable joint, one that will solve all the problems inherent in any panel type of curtain wall system is the most difficult and illusive. It is here that any system stands or falls for at the joint might occur:

(1) Leakage; (2) Expansion; (3) Contraction; (4) Icing; (5) Connection with; a. Other panels; b. Doors; c. Windows; d. Coping; e. Base; f. Change in angle and plane of the building.

(D) Core. The core material comprises the "heart" of the curtain wall panel. The selection of the right material is therefore of the utmost importance.

(E) Caulking or Gasketing. Improved caulking compounds designed for use on metal faced curtain wall construction have been developed. While caulking is predominantly used for weather sealing of joints, the use of gaskets is increasing. This problem requires careful investigation.

(F) Panel Assembly. The metal facing or panel of curtain wall units may be laminated or attached to the core by adhesives or held by mechanical attachment. Both methods have certain advantages. Research into the problem of bonding smooth surfaced porcelain enamel to various types of cores, both organic and inorganic, has resulted in special adhesives that manufacturers endorse as capable of giving satisfactory long life service. Mechanical bonding, of course, obviates dependency upon organic adhesives.

(G) Cost. The final product must be available at an erected cost which permits it to compete with conventional exterior wall materials.

PROPERTIES OF CORE MATERIAL

As a basis for the selection of a proper core Mr. Lescaze set up the following characteristics of the material which would be most suitable for the purpose:

CRITERIA FOR SUITABLE CORE MATERIAL: 1. About 15 cents per square foot — 1 inch thick; 2. "k" factor about .30; 3. Non-combustible; 4. Moisture resistant; 5. Rigid; 6. Weight of not more than 20 lbs. per cubic foot; 7. Dimensionally stable.

In his Report Mr. Lescaze lists the characteristics of three materials that he investigated as follows:

A. Tectum

a. weight	24 lbs./cu. ft.
b. "k" value	.51
c. cost	$.18/board foot
d. size	96" wide x any length
e. expansion	max. linear expansion thru range of 50 to 98 relative humidity and 70° is .15 of 1%
f. incombustible	
g. will not rot	
h. compressive strength	

(See Page 22)

ANNUAL CONVENTION

California Council of Architects

HOBERG'S RESORT LAKE COUNTY

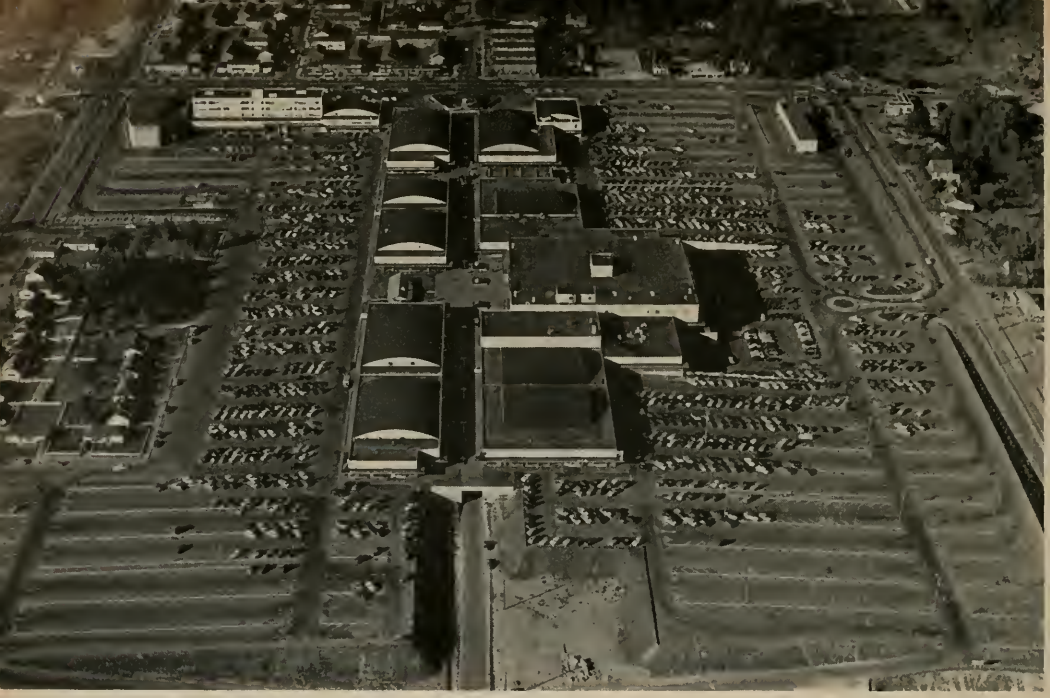
September 30 thru October 2

Architects attending the 1954 Annual California Council of Architects Convention at Hoberg's Resort in Lake County, will have an opportunity of seeing the mountain country of Northern California decked out in its finest coloring as by the latter part of September and the first part of October the vast vineyard areas of the secluded valleys, and the hillside shrubs and oaks, have taken on their multi-colored fall appearance and present one of the most beautiful scenes of nature ever to be viewed.

F. BOURN HAYNE
Convention Chairman

F. Bourn Hayne, convention manager, indicates architects and guests attending this year's convention will find it to be different from any previously held. A rough and ready, blue jean atmosphere will

(See Page 33)



NORTHGATE—Seattle, Washington. Serving area containing 250,000 population. Seven miles from downtown Seattle. Sixty-four retail shops; two department stores; twenty-four service shops; office building; forty professional offices; theatre of 1,500 seats; bank; parking for 5,000 autos. Service tunnel under mall; garden supplies (extreme right); gas and auto service at right intersection.

What Makes A Shopping Center Successful

By FRANK EMERY COX*

Sales Research and Business Development Analyst

FRANK EMERY COX

**EDITOR'S NOTE: Architect & Engineer will carry an additional treatment of shopping centers in the AUGUST issue. Mr. Cox, Manager of Sales Development for The Kawneer Company, Berkeley, California, will discuss the following subjects: 1. Different methods of computing parking; shopping habits; retail patterns. 2. Parking area layout planning by square foot for sales volume: economic surveys. 3. Determining buying power; designs for selling.*

SHOPPING CENTERS . . .

Shopping has gone suburban. Scientific planning and layout, coupled with statistical data gathered from economic surveys and topped with good architectural design, has brought this about.

The modern shopping center to be successful must be considered as the composite of a department store, a rural general store, a downtown shopping block, a supermarket, and the satellite stores that go with any established retail area.

There is scarcely any chance for an argument in pointing out that these stores placed side by side in integrated relationship with each other will do more volume than an equal number of single stores located indiscriminately.

This new type of "single-stop" shopping enterprise will generally have certain characteristics which are not usually identifiable with the old established downtown area.

Some of the features can be outlined as follows:

- Single Ownership
- Selectivity of Tenants
- Lease Control
- Interrelationship of Businesses
- Relaxed Shopping Habits
- Planned Parking
- Controlled Operation
- Store Space Based on Buying Power
- Floor Area Based on Square Footage Sales Expectancy
- Designed for Creation of Efficient "Machines for Selling."

NORWALK SQUARE . . . Norwalk, California. Owned by Pacific Mutual Life Insurance Company. "ONE-OWNERSHIP" type of Shopping Center operation.

Planning For Shopper Circulation

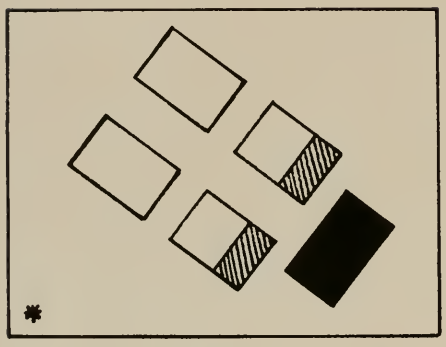


Fig. 1

Center planned without regard for maximum shopper circulation. Shaded area indicates department store; diagonal areas food stores (all power attractions); white portions satellite stores dependent on trade drawn by "power units."

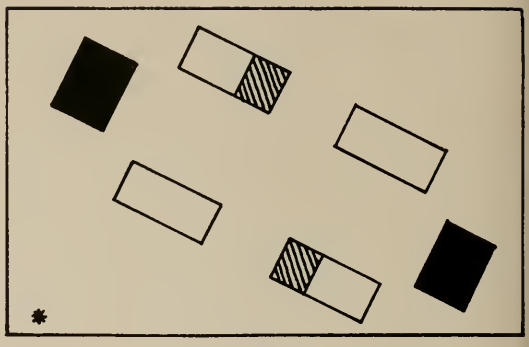


Fig. 2

Improvement of Figure 1 with "power attractions" at both ends (senior and junior department stores); diagonal area food stores. Note satellites between "principal attractions."

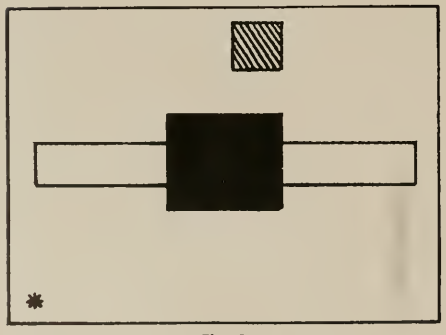


Fig. 3

"Center-heavy" plan. Shaded portion, department store (power unit); diagonal pattern, supermarket. White areas get less shopper circulation as distance varies from "power attractions."

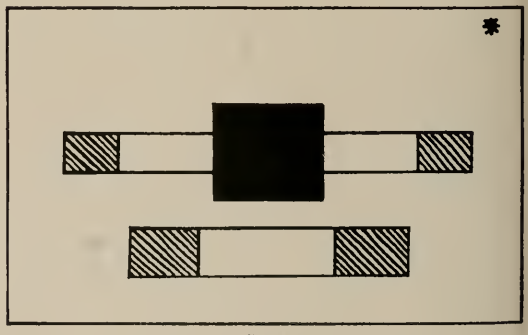


Fig. 4

Correction of "center-heavy" plan. Shaded portion, department store; diagonal shading, junior department stores and food markets. Proper locating of "power attractions" assures good shopper circulation, more overall sales volume, and better investment return for landlords.

NORTHGATE

Seattle, Washington

Supplementary food shops adjacent to a supermarket induce greater volume per square foot. Eight shops with entrances from market. Hollow tubular doors make easy access.

Small shops have entrance at other end from parking lot. Double locks supply security for individual tenants. High rental return results because of concentrated merchandising facilities.

SWANWAY—Tucson, Arizona. Scientific planning produces maximum traffic with resultant large retail sales, low overhead, and greater net profits. Maximum return to landlord depends on planning. Crowds shown below indicate large dollar sales per square foot. Note, supplementary stores in background.

CAPITAL CENTER
Salem, Oregon

Full department store, supermarket, drugs, women's wear, variety and similar supplementary shops.

A very successful center.

OWNERSHIP

As a general rule these new centers are under one ownership. In a few instances developers have sold property to various primary occupants, such as department stores or supermarkets (power units). This procedure seems not to have proved advantageous in all instances. Some of the advantages of single ownership are: control of parking facilities by landlord, control of maintenance; supervision of housekeeping, sanita-

FORT SUTTER . . . Sacramento, California. Karel Kooper, Architect. Supermarket with satellite food shops furnish "power attraction", with specialty shops grouped strategically around.

tion, and cleanliness; control of leasing conditions; development of seasonal promotion activities; unified advertising projects; integrated design; and many others.

TYPES OF SHOPPING CENTERS

To type shopping centers requires setting arbitrary standards, considering population of trading area, average family incomes, nationality of potential customers, floor area to be used, overall size, topographical conditions, geography, buying habits of expected trade, etc. Centers can be roughly classified as Neighborhood, District, or Regional.

Community and Neighborhood

This type of center might range from a supermarket with three or four satellite shops around it under one roof to a group of stores clustering about the "power unit" (supermarket). The building square footage is usually not over 75,000 square feet including storage facilities. Generally serves a maximum of 8,000, appraised in terms of driving time rather than distance. Ten minutes in transit from a center of this kind would appear to be a maximum potential.

District

Often in close proximity to newer subdivisions, sometimes along arterials, built on property line with parking in rear, or set behind one or two bays of parking with more in back. Elongated type seldom over 1,200 lineal feet. Generally conceded best planned in center of land area. Floor area from 75,000 to 150,000

NORWALK SQUARE . . .Norwalk, California. Note strategic location at road junctions. Serves population of 100,000 primary and a 200,000 secondary population.

BEFORE REMODEL . . . Avenue Market, Berkeley, California. Small general food center with five tenants, total area 10,000 square feet.

sq. ft., serving population of 30,000 to 200,000. Patronage from area within twenty minutes driving time.

Regional or Area

Generally scientifically planned with sufficient variety of storage to influence generous segment of trade from population of 200,000 to 1,000,000 and within thirty minutes driving time. Floor area usually runs from 150,000 to one million sq. ft. Stores number from fifty to one hundred with senior and junior department stores, two or three supermarkets, drug stores, and proportions of other stores. Often major department store will dominate as much as sixty per cent of gross sales. Serious study of future growth and expansion areas should be carefully considered.

Ingredients for Success

INTEGRATION — INTERRELATIONSHIP OF BUSINESS—SHOPPER CIRCULATION—SELECTIVITY OF TENANTS — LEASE CONTROL—PLANNED PARKING—DYNAMIC ECONOMIC SURVEY

AVENUE MARKET . . . AFTER REMODELING, sales volume more than doubled and the landlord's return tripled.

SWANWAY

Tucson, Arizona

A large neighborhood center in an outlying area . . . 60,000 square feet of buildings with o 40,000 square foot area used as selling space.

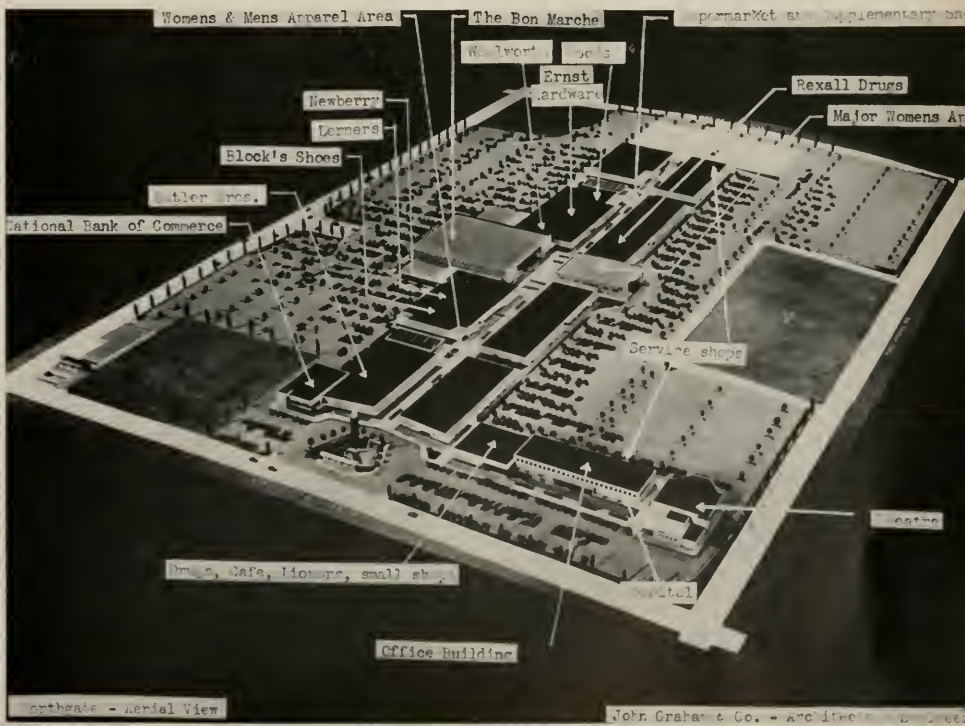
Supermarket (30,000 square feet) drug store (5,000 square feet.), small department store (5,000 square feet), shaes, women's wear, gifts, toys, bakery, liquor, condies, delicatessen, voriety, applionces, laundry, and parking facilities for 400 automobiles.

In older areas many outmoded neighborhood shopping centers can be rehabilitated by new lessee orientation, modern design, and construction overhauling.

Small department store or large supermarket, or both, furnish "power units" for the district center. Service shops are usually planned adjacent but inside orbit of general shopper circulation between retail establishments. Often a district center enjoys large "walk-to" trade in addition to vehicular customers. Proportion should be considered in surveys.

Often referred to as Area or Regional shopping centers, the large enterprises require more than the ordinary study and planning. Sales expectancies by a calculated method, often on a square footage basis, are determined. When so planned the entire center be-

NORTHGATE . . . Seattle, Washington — showing distribution of voriaus types of businesses.



McHENRY VILLAGE DRUG STORE . . . Modesto, California. A strong independent store strategically placed, well designed, with impressive display, thrives on competition and generates success. Such selectivity is a prerequisite.

comes an efficient "Machine for Selling." Careful attention is given to sign areas, sun control, exterior display space, entrances, weather protection, aisle width, showcases, color motif, floor covering, lighting, air conditioning, acoustical treatment, stock arrangement, interior display, and all the elements of merchandising.

Selectivity of Tenants

Screening of possible tenants requires much skill and attention. Purpose to be served is to promote greater feeling of unified harmony, balanced merchandising, induced shopper circulation, permanence of occupancy, large volume sales, lowered tenant turnover. A number of points should be considered in making the choice, such as:

1. Financial status. 2. Profit-loss experience. 3. Type merchandise sold. 4. Long term operating record. 5. Merchandising policies. 6. Advertising aggressiveness. 7. Public acceptance. 8. Type of employees. 9. Class of customers solicited. 10. Housekeeping record. 11. Competitive compatibility.

Typical Leasing Restrictions and Requirements

a. Observance of uniform store hours.
b. Sell comparable competitive lines.
c. No other store owned in same locality.
d. No lease assignment or sublease without consent.
e. Regular settlement and audited reports of volume.
f. Adjusted rent percentages of sales on or off premises.
g. Percentages apply to both merchandise and services.
h. Control of merchandise line carried.
i. Discouragement of price cutting.
j. Participation in cooperative advertising and promotion.
k. Control of both interior and exterior signs.
l. No special sales without consent.
m. Restriction of employee and tenant parking.
n. Adherence to standards of cleanliness and housekeeping.
o. Membership in central business association.

INTERRELATIONSHIP OF BUSINESS

Some businesses have an affinity for each other and thus create increased sales. Where such is the case, experience indicates that planning close proximity of complimentary lines adds over-all volume and profits for tenants and landlord. Seasoned retailers, leasing brokers, landlords, and property owners have learned that "affinity grouping" pays dividends. Some general categories are as follows:

1. Men's clothing, haberdasheries, men's hats, men's shoes, sports wear, sporting goods, luggage, liquors.
2. Women's wear, ladies shoes, millinery, lingerie, dresses, jewelry, juvenile shops, gifts, accessories.
3. Grocery stores, meat markets, fish markets, delicatessen, bakeries, doughnut shops, health food stores, fruits, vegetables, drugs and sundries, candies, nuts.
4. Larger unit items such as appliances, radios, television sets, housewares, furniture, hardware, paints, garden supplies, floor coverings.
5. Five-and-dime stores, novelties, art goods, books and stationery, photo supplies, florists.
6. Service concerns such as barber shops, beauty salons, laundromats, telegraph offices, post offices, banks, shoe repair shops, cleaners.
7. Auto accessories and related lines.

(Note—Department stores of different sizes should be located to encourage shopper circulation. Restaurants and fountains should be strategically placed to care for anticipated crowds in high traffic areas. Generally theatres, professional offices, nurseries, community buildings, etc., are kept somewhat remote from shopper traffic patterns.)

(To be concluded next month)

PHOTO CREDITS: Appreciation is expressed to the following who cooperated in making photographs available for this article: Northgate Company, Page 12, 19 (bottom), 21 and 23 (top); Steve Barrett, Page 14, 17; Pope Studios, Page 16 (bottom); Pacific Mutual Life Ins. Co., Page 16 (top); Roy Drachman Realty, Page 19 (top), 23 (bottom).

NIGHT SCENE — "ON THE MALL" . . . Northgote, Seattle, where conformity to unified patterns develops a maximum sales volume for all. Neighborly compatability is necessory for maximum success.

Structural Engineers Association of California

HOTEL DEL CORONADO, CALIFORNIA
October 14-15-16

Plans for the annual convention of the Structural Engineers Association of California, scheduled for October 14-15-16 at the Hotel del Coronado in Coronado, are progressing ahead of plans according to LeRoy Crandall, general chairman of the convention committee. One of the features already announced for the technical sessions, reports Crandall, will be a symposium on deep foundations with Captain Kenneth Godwin, C.E.C., U.S.N., Public Works Office of the 11th Naval District, as moderator.

HAROLD P. KING
President, SEAOC

Another featured technical paper will be presented by a well know research engineer from the East, according to George Brandow, technical program chairman.

B. E. Etcheverry, director of cost and commercial planning for Kaiser Steel Corporation, is scheduled to present a talk before the general convention sessions on the subject of general business conditions in the West and included in his talk will be a forecast of things to look for and future trends.

Friday evening, October 15, according to George Youngclaus, entertainment committee chairman, has been set aside by convention officials for entertainment, and through the cooperation of hotel management, transportation officials, and the businessmen and governmental representatives in nearby Tijuana, Mexico, convention delegates will be given an opportunity of visiting the quaint city of Tijuana and attending the Jai-Alai games held in the casino nightly. Jai-Alai is a fast moving game very popular in Mexico, South American countries and Cuba.

According to Convention Chairman Crandall, and Walter Norris, banquet chairman, another highlight of the entertainment program of the convention will be observed on Saturday evening, October 16, with observation of the traditional cocktail party and annual banquet which will have for its theme this year "An Evening In Mexico," with colorful troubadours, sombreros, and other "south-of-the-border" entertainers performing for the convention delegates.

Provision is being made again this year under supervision of Mrs. Evelyn Hillman, chairman of the ladies' committee, for the entertainment of wives of engineers and guests during the time technical engineering sessions are being held. Special scenic trips of Coronado and adjacent points of interest are being included in the planned itinerary.

Complete details of the technical program will be announced at a later date by George Brandow, Technical Committee chairman. However, at present the program tentatively includes Lynn S. Beedle, assistant director of the Fritz Engineering Laboratory of Lehigh University, who will discuss the laboratory's findings in respect to the "Limit Design" theory; and discus-

(See Opposite Page)

A Technical Report
PORCELAIN ENAMEL CURTAIN WALLS

(From Page 11)

before any deformation—60 psi	
B. Paper Honeycomb	
a. weight	1.74#/cu. ft.
b. "k" value filled with perlite	.30
c. cost—inc. perlite	$.07/board foot
d. size	can be made to any practical size
e. incombustible	
f. will not rot	
g. compressive strength	140#/sq. inch
C. Fiberglas	
a. weight	6# cu. ft.
b. "k" value	.23
c. cost	$.08/board foot
d. size	any size
e. expansion	dimensionally stable
f. resistance to fire	non-combustible up to 1000° F.
g. will not rot	

DETERMINING INSULATION THICKNESS

Mr. Lescaze supplies information on the formulas used to determine the thickness of the required insulation. When the thickness is determined it is possible to calculate the "U" value of the wall section.

Thickness of insulation required to prevent surface condensation for medium-moisture occupancies. Relative humidity—20% to 45% (winter).

Auditoriums, gymnasiums, theatres
Bakeries, confectioners, lunchrooms, unless poorly ventilated
Churches, schools, hospitals
Dwellings, including houses, apartments, hotels (highest RH in kitchens, laundries, bath)
Factories, general manufacturing, except wet processes
Markets, meat, vegetables
Offices, banks
Stores, department, drug, general, with large customer patronage
Swimming pools, natatoriums, if well ventilated
Warehouses, general, from DESIGN OF INSULATED BUILDINGS by Tyler Rogers.

For dry occupancies, RH is below 20.'. insulation required would be less than design for above.

Thickness of insulation required to prevent surface condensation

t = inside air temperature (dry bulb) = 70°
td = dew point = 47.9
to = minimum outside air temperature = 0°
.61 = inside still air surface resistance
R.H. = relative humidity = 45%

R_t

Resistance (total resistance of insulation required to prevent surface condensation)

$$R_t = \frac{.61\ (t - to)}{t - td} = \frac{.61\ (70 - 0)}{70 - 47.9} = \frac{42.7}{22.1} = 1.94$$

Insulation thickness (th)

$$th = \frac{R_t - R}{r}$$

R = resistance of P.E.
$r = \frac{1}{k}$ of insulating material

steel k = 312

$$r = \frac{1}{312} = .0032$$

disregarding P.E. and k of porcelain enamel

"U"

$$U = \frac{1}{\frac{1}{f'} + \frac{x}{k} + \frac{1}{f_o}}$$

$1/f' = .17$ = resistance — inside surface air film, still air
$1/f_o = .61$ = resistance — outside surface air film 15 mph wind
x = wall thickness — 2.63" (using 2½" insulation)
k = insulation

FACTORS RELATING TO CAULKING OR GASKETING

In a panel wall system and its method of joining one panel to another, the problem of an effective weather and moisture seal is of paramount importance. The

(See Page 36)

Annual Convention California Structural Engineers

(From Opposite Page)

sions on the subjects of "Deep Foundations", Construction Trends", and other educational and economic subjects.

The site of this year's convention is only a few minutes' driving time, over excellent highways, from Old Mexico and numerous places of outstanding historical interest in nearby San Diego and surrounding area. The Structural Engineers Association of Southern California, hosts for the 1954 convention, have scheduled a number of special features, which will contribute to the success and enjoyment of those attending this year's convention sessions. Those who attended the 1950 convention at Coronado will remember the excellent accomodations, and convention and recreational facilities, and there is a noticeable air of enthusiasm among those planning this year's convention to make it more successful than any preceding one.

Chairmen of the committees are: General chairman, LeRoy Crandall, Consulting Foundation Engineer, Los Angeles; technical program committee, George Brandow, Brandow & Johnston, Los Angeles; transportation committee, George Carroll, C. D. Wailes Corp., Sunland; attendance and registration committee, Marvin Kudroff, Daniel, Mann, Johnson & Mendenhall, Los Angeles; finance committee, LeRoy Frandsen, Walter R. Steyer Co., Los Angeles; banquet committee, Walter Norris, Norris Steel Co., Gardena; resolutions committee, Donald F. Shugart, Consulting Structural Engineer, Pasadena; house committee, John Holstein, J. J. Middleton, Consulting Engineer, Los Angeles; publicity committee, George H. de la Vergne, Kaiser Steel Corp., Los Angeles; social program committee, George Youngclaus, Portland Cement Assn., Los Angeles.

Mr. Youngclaus will be assisted by Mrs. Ernest Hillman, Jr., chairman of the ladies committee, the wife of Ernest Hillman, Jr., of Hillman & Nowell, Los Angeles; and by Philip Helsley, chaiman of the golf committee, San Diego Testing Laboratory, San Diego.

These convention chairmen are being assisted and guided by Harold P. King, SEAOC president; Joseph Sheffet, SEAOC secretary-treasurer; and SEAOC directors Ben Benioff and William T. Wheeler; SEAOC executive secretary Don Wiltse, and director Rubin Binder.

GENERAL CONTRACTING FIRM IS ORGANIZED

John B. Jessup, until recently with the firm of Williams and Burrows, has formed The Jessup Company, Builders and General Contractors.

The firm will engage chiefly in the residential, light commercial and school construction field. Offices will be maintained in San Francisco.

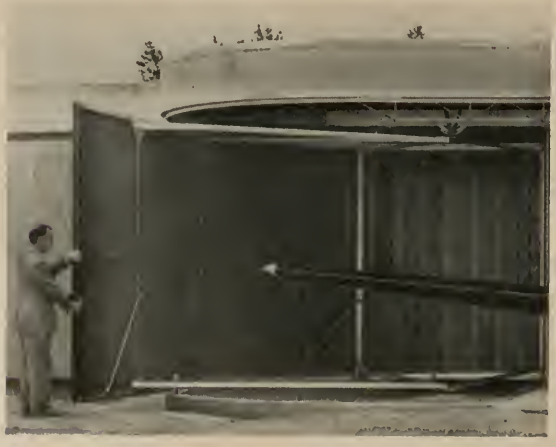
Six Cloverleaf Quad Hangars provide space for twenty-three standard private airplanes. Twenty-fourth quad serves as waiting room and utility area for pilots. *(Roche Studio Photo)*

CLOVERLEAF QUAD HANGARS FOR SMALL AIRCRAFT

MONTEREY AIRPORT, CALIFORNIA

By MILO S. GATES*

One of the major problems faced by modern airports is that of housing, at moderate cost, the small, privately-owned aircraft which use those airports as operational bases. The Monterey Airport has recently found that the ideal solution to this problem is the Cloverleaf Quad Hangar, a prefabricated job quickly installed which meets all of the airport's requirements in this field. Six such hangars were just installed at the Mon-

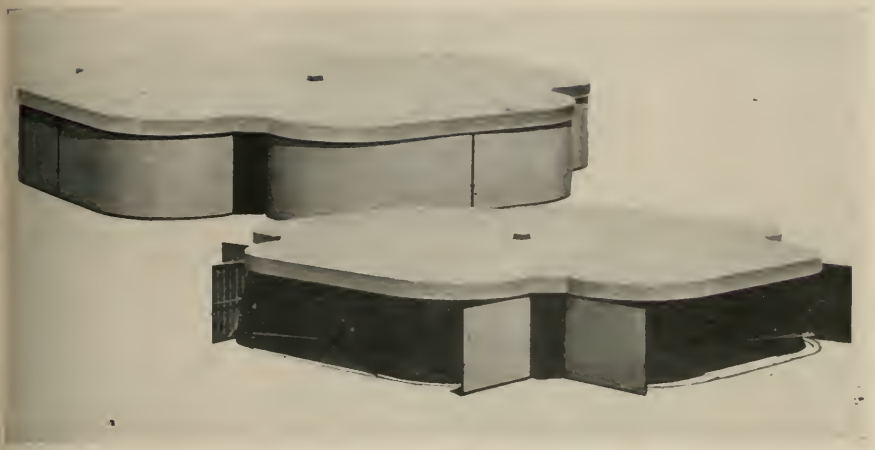


QUAD HANGAR INSPECTED BY ITS INVENTOR

Dwen Younger, inventor of the "Quad Hangar", inspects a recent unit installation.

Ease with which the doors are opened and closed is being demonstrated.

San Jose Photographic Studio



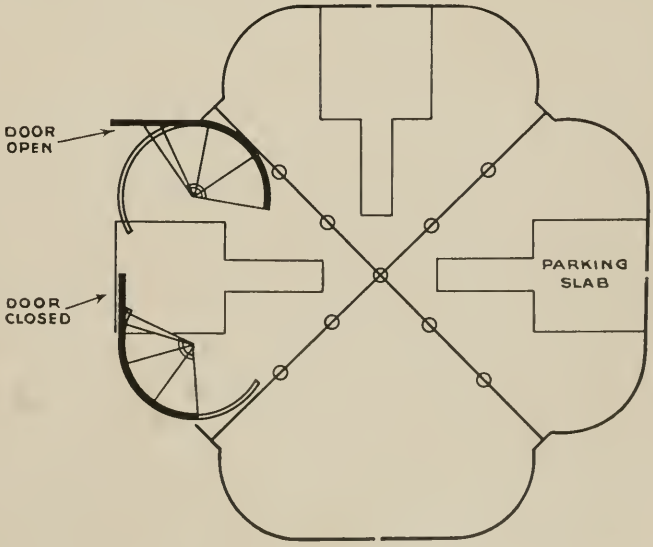
Because of their unique design, the Cloverleaf Hangars can be located close together, saving ground space.

terey Airport by Bishop, Younger, Bradley Company, San Francisco contractors who distribute the Cloverleaf Quad Hangars in the West.

The Cloverleaf Hangar was designed by Dwen Younger to be completely functional. Although each hangar will house four standard private planes, it requires a minimum of ground space and considerably less taxi-way than other hangars designed for the same job. Its distinctive design hinges about a new type of hangar door which forms almost all of the exterior wall surface as well as performing the normal closing function.

Another distinctive feature is that each quad of the hangar is completely separated from the others, pro-

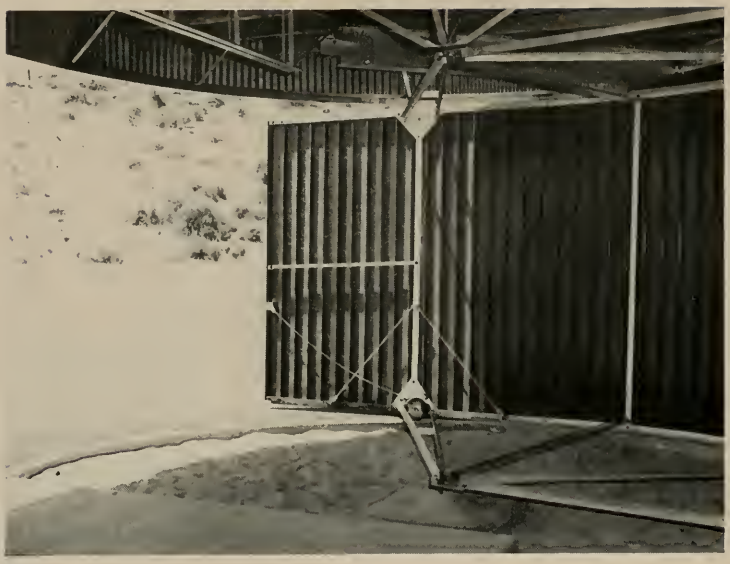
Each of the four aircraft using a hangar is completely sealed off from the other three in the compact design of the Cloverleof Quod.



FLOOR PLAN

Individual planes are reached only through the metal exterior doors to which plane owners hold keys.

Photo Courtesy Truscon Division, Republic Steel



DUAL PURPOSE DOORS

Are especially functional element of the Cloverleaf Quad Hangar's design.

Mounted on track and finger-tip controlled.

viding completely private storage for plane-owners. Once installed, the Cloverleaf requires practically no maintenance. Its metal surface is treated against weather and tight, prefabricated construction makes it weather-tight, sand-proof and fire-resistant.

At Monterey, one of the quads of a hangar has been converted into a waiting room while the other three quads house a plane each. At other airfields—and in

(See Page 36)

NEWS AND COMMENT ON ART

(From Page 8)

Queen Marie Antoinette. They are made of ebony, faced with Japanese lacquer showing landscapes, plants and animals on gold background and are profusely mounted with gilt bronze appliques.

For the past hundred years the pieces have been in the possession of one of New York's oldest families.

THIRD INFANTRY DIVISION SPECIAL ART EXHIBIT

An exhibition of World War II paintings and drawings by George Biddle will be displayed at the M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, on July 15-16-17.

The paintings were completed from on-the-spot sketches of soldiers and civilians at the front while the artist was spending eight months with our troops "to obtain a pictorial record of war in all its phases" under U. S. Government phases. The project was inaugurated in 1943 when Biddle was asked by the War Department to organize the War Department Art Advisory Committee which eventually dispatched twenty-three artists in the armed services and nineteen civilians to twelve oversea fronts.

Part of the display is representative of human interest sketches made as an observer with the Third Division during the momentous crossing of the Volturno River in Italy with the Second Battalion of the 15th Infantry Regiment.

Biddle's work is represented in the permanent collections of leading American museums.

SAN FRANCISCO MUSEUM OF ART SERVES AS MOTION PICTURE CENTER

The San Francisco Museum of Art will become the West Coast center for circulating motion pictures from the Museum of Modern Art Film Library, beginning September, 1954, according to a recent announcement by the Boards of Trustees of both New York and San Francisco institutions.

Under the new plan 16 mm. prints of 35 programs of motion pictures from the collection of the Museum of Modern Art will be circulated by the San Francisco Museum of Art to schools, colleges, universities and film study groups in California, Washington, Oregon, Idaho, Arizona, Hawaii, and Alaska. The films will be available from the San Francisco Museum on exactly the same terms and conditions which govern the use of the Films' Library Motion Picture Collection by educational institutions today.

ENGINEER MOVES TO LOS ANGELES

Vernon A. Smoots, formerly the resident partner in charge of the New York office of Dames & Moore, is now a resident partner in the firm's Los Angeles office.

WILL INSURANCE COVER YOUR LOSS?

Certificates of insurance under a Comprehensive Liability policy will generally indicate that Contractual Liability insurance is provided. This can be one of the most misleading statements to the architect who is desirous of making certain that the owner is protected by the contractor's purchase of this type of insurance.

The reason is that the Contractual Liability insurance applies only to the contract as defined in the policy which can range anywhere from "any written agreement" to such specific types of agreements as lease, sidetrack or easement agreements. Each company has a different definition of what constitutes a contract so that even though it may afford Contractual Liability insurance it is restricted to the definition of the word contract as it appears on its own policy.

HENRY J. TRAINOR
Consultant, Miller & Ames, Insurance Brokers

The importance of determining what protection is afforded by the contractor's policy cannot be overemphasized because the hold harmless clause which is the heart of Contractual Liability is becoming increasingly common in today's construction contracts.

As originally designed, the hold harmless clause filled a proper need by requiring the contractor to indemnify the owner for expenses involved in defending lawsuits filed as a result of the contractor's negligence. They properly apply where the owner exercises no direct control over the contractor's operations.

Recently, however, the agreements have made the contractor responsible for joint negligence: that is, those cases where both the owner and contractor were jointly responsible for the accident. Such an agreement has had the undesirable effect of making the contractor assume responsibility for another person's negligence. The situation has gone even further, to the point where the contractor must assume full responsibility for any accidents in any way connected with the work, regardless of negligence. An actual case occurred when some refinery workers turned on a faulty machine, poisoning two painters working at the plant. When the poisoned painters brought suit against the refinery it was handed back to the contractor for defense and settlement on the grounds that the claim arose out of his work, following the simple logic that if he had not been there, his men would not have been poisoned.

For an architect to rely on a hold harmless agreement to fully protect the owner under circumstances such as this last case, is not recommended. There is questionable legality to this type of agreement since there are certain non-delegable responsibilities which cannot be imposed on another by contract. Even if the agreement were legal, there is always the question of the contract being excluded under the policy of the contractor with a result that any defense must be borne by the contractor himself.

Actually, the abuse of the hold harmless clause is creating double insurance costs because the owner, undoubtedly, has insurance in his own right to protect him for any liability which he might have. When the contractor purchases the Contractual Liability insurance he is then paying for double insurance. There is no reason why each party cannot bear the responsibility for its own negligence without attempting to pass it on to another party. The owners are not the only ones who attempt to relieve themselves of liability through hold harmless agreements, for, if the subcontractors were to read carefully the fine print of many of the subcontracts drawn up by the general contractors, they would find that they have assumed responsibilities far out-weighing the hazards connected with their particular subcontract.

In the event of a serious claim with two or three agreements of this type involved the lawsuits required to determine the legal liability of each of the parties involved could conceivably take years to decide.

EDITOR'S NOTE: The insurance brokerage firm of Miller & Ames, San Francisco, has for many years specialized in administration of insurance programs for all phases of the construction industry, and further explanation of any points raised in this series of articles will be gladly furnished upon request.

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SOUTHERN CALIFORNIA CHAPTER

The Southern California Gas Company served as "hosts" at the July meeting which was held at the Company's gas compressor plant on Olympic and Santa Fe with Wm. Glenn Balch acting as program chairman.

Following dinner (Dutch treat) a tour was made of the plant.

Chairman William S. Beckett of the 60th Anniversary Exhibit, reminded members that entries would not be accepted after the 30th of July, and also pointed out that the exhibit was open to all corporate members. The exhibit, featuring the Southern California Chapter's 60th anniversary would be held at the Los Angeles Municipal Arts Center and will be open to the general public for the period of two weeks beginning August 17th.

Following the exhibition in Los Angeles, it is planned to show the material in Long Beach, Bakersfield and other Southern California communities.

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OREGON CHAPTER

Summer activities represent largely a continuation of committe groups working on long range programs with allied groups and civil officials.

Consideration is being given to the possibilities of appointing a special committee to work with real estate groups and the construction industry as a whole, on a study of revision of the building code. If preliminary study indicates action advisable, a committee will be named to check into the situation in detail in the fall.

SAN DIEGO CHAPTER

"Your A.I.A. Chapter Is Doing Things," was the theme of the July meeting. Closed to all except members, the meeting program reviewed the very active past year and progress made by the Chapter. Reports

Orange County Chapter:
Philmer J. Ellerbroek, President; John A. Nordbak, Vice-President; Chas. A. Hunter, Treasurer; Gates W. Burraws, Secretary. Directors: Everett E. Parks, Chas. A. Hunter and Everett L. Child. Chapter office 1606 Bust St., Santa Ana.

Oregon Chapter:
Holman J. Barnes, President; Albert W. Hilgers, Vice-President; Donald W. Edmundson, Secretary; DeWitt C. Robinson, Treasurer, and H. Abbott Lawrence, Trustee. Office of Secretary, 325 Henry Bldg., Portland.

Pasadena Chapter:
Wallace C. Bonsall, President; Henry C. Burge, Vice-President; George A. Schaffer, Secretary; Robert S. Cook, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Victor L. Wulff, President; Richard L. Pinnell, Vice-President; Edward G. Holliday, Secretary; Delmar S. Mitchell, Treasurer. Directors, Donald Campbell, Jack R. Lewis and Louis A. Dean. Sec'y Office, 4562 Boundary St., San Diego.

San Joaquin Chapter:
John P. Miller (Fresno), President; Byron C. Brodrick (Fresno), Vice-President; Allen Y. Lew (Fresno), Secretary; Lloyd J. Fletcher (Visalia), Treasurer. Directors, Wm. G. Hyberg, Robert C. Kaestner, Maurice J. Metz. Sec. Office, Fulton-Fresno Bldg., Fresno.

Santa Barbara Chapter:
Lewis A. Storrs, President; Lutah Maria Riggs, Vice-President; Robert Ingle Hoyt, Secretary; Roy W. Cheesman, Treas. Corresponding Secretary: F. Raymond Ford, 238 La Marina, Santa Barbara.

Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
Nelson J. Marrison, President; Gilbert M. Wajahn, 1st Vice-President; Robert H. Wohleb, 2nd Vice-President; Gordon N. Johnson, Secretary; Robert A. Parker, Treasurer. Directors: Silas E. Nelson, Lyle N. Swedberg.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
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Spokane Chapter:
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Hawaii Chapter:
Kenji Onodera, President, 3518 McCarrison St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Raden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lawe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

were made by committee chairmen and plans announced for future activities.

Details of the recent A.I.A. national convention in Boston were given by chapter delegates who were in attendance, and a complete story of the architectural profession activities, nation-wide, related.

Architect George Lykos, chairman of the Professional Practices Committee, reported worthwhile progress on his group's phase of Chapter relations. This committee is dedicated to the principal that through understanding of each member's problems, of professional ethics and of good business principles, will result in Chapter harmony and improved professional practice in the San Diego area.

New corporate member: George Foster has become a corporate member of the Chapter.

WASHINGTON STATE CHAPTER

The A.I.A.-Producers' Council Field Day this year was better attended than any in history with more than 150 architects and producers devoting themselves to golf, baseball, badminton, horseshoes and beef barbecue. The baseball game, introduced into the Field Day for the first time this year, proved very popular with Jack Petersen's "Producers" vanquishing John Mattson's "Architects" with something like a football score—but, there will be another year.

The next meeting will be the annual election of officers.

EAST BAY CHAPTER

"Where Are We Going" was the subject of the July meeting held in the Palm Room of New Milani's Restaurant, Oakland.

The meeting was devoted entirely to an open discussion from the floor with a good number of members present taking part. As was pointed out, only by all architects taking part actively, will problems confronting the profession be satisfactorily solved.

Announcement was made that the August meeting

(See Page 33)

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Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

Alexander L. van der Hart, representative of Corning Fibre Glass of Palo Alto, was the principal speaker at the July meeting held in the Officers Club, Presidio of San Francisco, taking as his subject the Indonesian problem.

Mr. van der Hart's family moved to the Netherlands Indies in the early 1800's and have been active naval officers there ever since. Graduating from the Rotterdam School of Economics with a Diploma of Commercial Economics, he attended the Institute for World Economy and Sea Traffic; Economic Faculty of the University of Kiel (Germany), and was Superintendent of the Commercial and Transport Department of the Netherlands Indies Railway Co., Ltd., in Semarang, Java.

At the start of World War II, he was a reserve 1st lieutenant, Infantry Royal Netherlands Indies Army; mobilized in December, 1941, and sent to Sumatra on a special commission in January, 1942. He was made a prisoner of war by the Japanese and spent three and a half years in prison camps all over the Archipelago. He was honorably discharged from the Royal Netherlands Indies Army as a Captain in 1949.

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STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Regular meetings have been dispensed with during July and August, however, a number of special events have been scheduled for this period including the Annual Field Day, August 6th, which will be held this year at the Oakmont Country Club. Scheduled for the day are swimming, baseball, golf, entertainment, and a good dinner.

A joint meeting with A.S.C.E. has been scheduled for September and will be the regular meeting, although set for the second Wednesday in September.

The Board of Directors has appointed an Honorary Membership Commitee to review nominations and make recommendations for "Honorary Membership." awards. A full report will be made at a later date.

New members include: Robert J. Bentson (Member); Jacob Joseph, David W. Kwan, G. S. Manguson, Robert G. Prior, Walter D. Saunders, and Leonard Standers, all Associated Members.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The Annual SEAONC Picnic was held mid-July at the Sonoma Golf and Country Club with a large number of members and guests attending. The program committee, comprising Bill Brewer, Robert Bowles, MacGregor Graham, Robert Harrington, John

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

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Structural Engineers Association of
Oregon
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Society of American Military
Engineers—San Francisco Post
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Mitchell, Eric Moorehead, Ted Newman, Armand Nishkian, and Don Teixeira arranged a full day's schedule of golf, swimming, baseball, and entertainment. Many prizes were available and awards made to those who excelled in their favorite sport.

The Emergency Committee is nearing completion of a report to the Civil Defense of San Francisco, regarding "What a Householder Should Do In Case of an Earthquake." Another committee, Joint Building Codes Committee, working with a similar committee representing the ASCE, has completed its report, "Recommended Revisions to the Proposed Revision of the San Francisco Building Code, 1953," covering Article 23, and Articles 29 to 47 inclusive. The report has been approved by the Boards of Directors of both the SEAONC and the ASCE.

New members: The following have become members of the SEAONC, Carl J. Jamison, Nels C. Ring, and Stanley E. Teixeira.

THE FEMINEERS

Mrs. Lotte von Strahl, noted lecturer, graphologist, linguist and world traveler, was the principal speaker at the July meeting held in the Elk's Club, San Francisco.

Baroness von Strahl has lived and traveled in Europe and Africa, and worked with the late Field Marshall Jan Chrisian Smuts in the Intelligence Department and Censorship Division of the Government of South Africa, so gave a very interesting and educational talk on world affairs, social problems, and the study of child development.

ENGINEER HENRY L. MARCHAND DIES OF HEART ATTACK

Henry L. Marchand, structural engineer, died in the St. Francis Hospital, San Francisco, recently of a heart attack.

Marchand was born in Cognac, France, graduated from the Ecole Centrale in Paris with the degree of Engineer of Arts and Manufacturers, and came to San Francisco in 1927 where he engaged in the practice of structural engineering. He established his own office in 1946.

ENGINEERS ASSIST IN PLYWOOD DIAPHRAGM TEST PROGRAM

In response to a request from David A. Countryman, civil engineer for the Douglas Fir Plywood Association, a preliminary report has been prepared by the Structural Engineers Association of Northern California's Research Subcommittee on Plywood Diaphragms.

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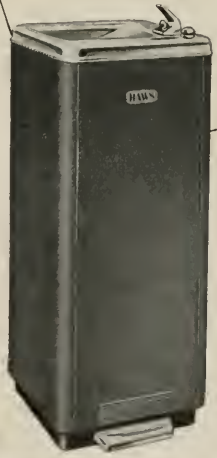

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Program
John C. Cowley
The Brookman Company, Inc.
2833 Third Street

Advisory
A. L. West, Jr.
Aluminum Company of America
615 Russ Building, 4

Public Relations
Andre R. Roegiers
Arcadia Metal Products
P.O. Box 3343, Rincon Annex

MEETINGS

Executive committee meetings will be held on the 3rd Tuesday of each month.
Informational meetings will be held at the Palace Hotel, 1st Monday of each month.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

A.I.A. ACTIVITIES

(From Page 29)

would be a joint meeting with members of the Coast Valleys Chapter and would be held on August 12, at the Fiberglass Plant in Santa Clara. Following dinner a tour will be made of the plant.

The Heart Committee has been increased to include Russ deLappe (Chm.), Cec Moyer, John B. Anthony, Chas. Goebel, Mac Reynolds, Geo. Simonds, Hans Ostwald, Don Hardison, and the work divided into two sections: 1) study and research, and 2) public relations.

PASADENA CHAPTER

Don Dittberner of the I.B.M. Corporation was the principal speaker at the July meeting, discussing in interesting detail "electronic equipment" and the extensive research that is constanly going on for new equipment and advancement of present day machinery of a precision character.

A number of proposed amendments to the Chapter By-Laws have been submitted and will be acted upon at the August meeting.

CALIFORNIA COUNCIL ARCHITECTS

(From Page 11)

prevail in keeping with the surrounding resort motif, and while the spacious hotel headquarters, dining room, recreation hall and all facilities of Hoberg's will be "turned over" to the convention, housing is strictly informal with individual units being available at modest rates.

Hoberg's is one of the oldest, and largest, resort spots in the famed Lake County area which can proudly boast of a great variety of recreational and scenic attractions. Nearby is Clear Lake, largest body of fresh water in the State of California, and not too far distant are the internationally known medical hot springs and natural steam geysers of Napa and Sonoma counties, while a little more distant, but within easy driving distance over modern highways is the extensive giant Redwood tree's area of the Northern California coastal region.

Swimming, tennis, fishing, horseback riding, hiking, golf and a wide variety of other recreational features are available at Hoberg's. Even an airplane landing field is available for those who wish to reach the resort by air.

Emphasis at this year's convention has been directed towards a simple, inexpensive good time, in good taste, and stimulated by enough consideration of architectural and professional subjects to make attendance at the convention well worth while.

The feature panel discussion will set the theme of the meetings—"Manufacturer's Literature—from Mail Basket to Waste Basket" and representatives of building product manufacturers, leading architectural publications, advertising agencies, officials of The American Institute of Architects, and architects have been invited to take part in the discussions. Each panel member will be given the opportunity of presenting his opinion of any building material product or profession and thus it is hoped a great deal of constructive material will be offered.

The major committees of the California Council of Architects, including the Governmental Relations, Public Relations, School Buildings, will sit in open sessions for an interchange of viewpoints in their respective fields.

The general technical conferences, as announced by Architect Hayne, will include: special social activities for Thursday, September 30, cocktail party followed by an outdoor barbecue.

Friday's sessions will include committe discussions and the major panel discussion with another cocktail hour before dinner.

Saturday's program will include presentation of convention resolutions to Council directors and the annual Sierra-Nevada A.I.A. regional conference in the morning, and an afternoon of sports and entertainment sponsored by the Producers Council. Saturday evening will be the occasion of the Annual Sportsman's Dinner and presentation of awards by the Producers' Council. There will be dancing every evening.

Among special features is a joint conference of members of the California and Nevada State Boards of Architectural Examiners, and a program designed for Junior Associates.

Special entertainment being planned includes a tour of the wine country of Napa and Sonoma Valleys and a special afternoon of wine and cheese tasting presented through cooperation of the Wine Advisory Board.

"This convention of California architects will reflect our belief that the future of the architectural profession in the United States lies in the dynamic energy, imagination, and desire for change which exists uniquely in California," states Convention Chairman Hayne.

TILT-UP PRECAST CONCRETE PATENT RULED INVALID

The Structural Concrete Association of Los Angeles announced recently that a trial in Los Angeles between O. K. Earl, Jr., and National Panelcrete, Inc., holder of patent No. 2,531,576, found the patent to be void.

Of importance to building contractors is that patent No. 2,531,576, commonly known as the McClellan Panelcrete patent on tilt-up precast concrete construction, is believed to have "stiffled" expansion in the precast concrete construction field because of its existence and and lack of adjudication.

The presiding judge ruled the patent invalid on grounds of "prior art and lack of invention."

Expert testimony at the trial was given by F. Thomas Collins, consulting engineer of San Gabriel, California, who has long advocated tilt-up precast concrete construction.

PERSONALITIES

WILLIAM E. DREUSIKE, Office Manager
Judson-Pacific-Murphy-Kiewit
Emeryville, California

William E. Dreusike, Office Manager for the joint venture Judson-Pacific-Murphy-Kiewit, represents the third generation of a Dreusike in the steel business. Born May 12, 1918, in San Francisco, William Dreusike attended the public schools in Berkeley where he resided as a boy, later returning to San Francisco where he attended Heald's Engineering College.

WILLIAM E. DREUSIKE
Office Manager

His first job in the steel business was that of a shop ironworker with the Berkeley Steel Construction Company; later he went with the California Steel Products as assistant plant superintendent, and during World War II, was employed by the Matson Navigation Company as Hull Engineer and Chief Storekeeper in ship repair and conversion work.

Dreusike joined the Judson-Pacific-Murphy Corpn in 1945 as an estimator; advancing with the company, he held positions of structural detailer and salesman and in 1953 was appointed to the position of Office Mananger for the joint venture of Judson-Pacific-Murphy-Kiewit, organized for the sole purpose of constructing the $25,000,000 super-structure of the Richmond-San Rafael Bridge now in progress, and which, when completed, will link Contra Costa County and Marin County with a super-modern highway.

He is chairman of the Concord, California, city planning commission and represents Contra Costa County on the Bay Area Regional Planning Commissioners Conference; is a member of the Structural Engineers Association of Northern California, East Bay Structural Engineers Society, and the Engineering Club of San Francisco. Hobbies include gardening and model ship building. Is married, has two children and resides in Concord, California.

NEXT MONTH: Joseph Daniels, Engineer, Seattle, Washington.

AMERICAN SOCIETY OF CIVIL ENGINEERS FORM LOS ANGELES STRUCTURAL UNIT

The first regular meeting of the newly formed structural group of the Los Angeles Section, American Society of Civil Engineers, was held recently in the Clark Hotel.

The new organization is one of several technical groups within the Los Angeles Section designed to serve the specialized needs of the membership, and to advance knowledge within the field. Formation of the Sanitary Group was followed by the Soil Mechanics Group, the Transportation Group, the Hydraulics Group, and finally the Structural Group. Advancement of knowledge in the field of structures, particularly in the Los Angeles area, is a prime object of this group, as is the professional application of this knowledge to the solution of engineering problems. The new officers will not establish definite lines of activity for the immediate future. The Structural Group plans to work in close cooperation with the Structural Engineers Association of Southern California.

The election of the officers was unanimous. Harald Omsted, chief structural engineer with the Los Angeles City Board of Education is the chairman. Mr. Omstad was chairman of the interim Committee which formed the new group, and has worked hard toward this goal. Ernst Maag, supervising structural engineer with the Los Angeles office of the Division of Architecture, was a logical choice for vice-chairman. Charles M. Corbit, Jr., American Institute of Steel Construction, is now secretary-treasurer of this Structural Group, and of the Structural Engineers Association of Southern California. Consulting Engineers John K. Minasian and Roland A. Phillco complete the list of the directors.

Membership in this group will include not only regular members of the Los Angeles Section, A.S.C.E., but also other interested members of the building industry within the area. Students of the local Universities will be welcomed to the meetings.

Following the formalities of adoption of the constitution and election of officers for the remainder of the year, Professor C. Martin Duke of the University of California talked on earthquake strain measurements in a reinforced concrete building.

Professor Duke's talk was an appropriate one for the initial meeting of the group. During the past two years, the response of a typical reinforced concrete building due to earthquakes has been investigated. Plans for the program were made during the construction of the Engineering Building located on the Los Angeles campus of the University of California, when a wide variety of strain and deflection measuring devices were incorporated in the structure. In addition, the researchers have a seismograph of the U. S. Coast and Geodetic Survey installed at the site so that the characteristics of the earthquake at the particular location may be determined with accuracy.

The Engineering Building is a three story reinforced concrete structure, in which resistance to transverse seismic forces is largely provided by rotation in the

concrete diaphragms. Consequently the location of the instruments was chosen with a great deal of care, and the analysis by analytical methods to check the recorded measurements was a complicated one. A great deal of aid was given Mr. Duke in his investigations by Mr. Robert Brisbane of the University staff, and by many students.

In less than one-half second following the beginning of an earthquake, the measuring devices and seismograph are automatically set in operation. Through the use of these devices a filmed record of building strain, deflection, and ground motion can be made during any earthquake. The purpose of the investigation was to correlate building strain with the intensity of earthquake ground motion, and also to seek information on resonant and non-resonant building response.

Significant records for two earthquakes — August 23, 1952, and January 12, 1954 — have thus far been obtained. A true appreciation of rather simply stated numerical results of such investigations involves a realization of the tremendous amount of work required to reduce data gathered by the instruments to a workable form, and to interpret the results. Involved numerical calculations are usually required, and the derivation of conclusions requires the highest in engineering judgment.

The maximum ground accellerations determined by the seismograph for the two shocks were respectively 0.7 of one per cent, and one per cent of the acceleration of gravity. In the earlier earthquake, measurements showed the maximum applied stress in the concrete to be 10 p.s.i., with an accompanying frequency of building motion of approximately three cycles per second. The maximum deflection of the second floor with respect to the first was 0.004 inches. The slightly more severe shock of January 12th, however, resulted in a maximum applied stress in the concrete of 60 p.s.i., still with an accompanying frequency of building motion of three cycles per second.

This data shows an interesting point. While the maximum ground accelleration in the January 12th earthquake was only slightly greater than in the earlier shock, the recorded strains were about six times greater. This large difference in response seems to be explainable in terms of the dominant frequencies of the ground accellerations, for this frequency ranged from five to eight cycles per second on August 23rd, and from three to five cycles per second on January 12th, with most of the latter earthquake occurring at the three cycles per second frequency. It is obvious that on January 12th the frequency of the building of three cycles per second was nearly matched by that of the earthquake, and a condition of resonance was in effect.

The building has also been investigated by analytical methods. The most significant result of this investigation is the importance of rotation of diaphragms in providing resistance to the shaking of an earthquake. Approximately 93 per cent of the deflection of the west end of the building is due to rotation, while the remaining seven per cent is due to pure side-to-side motion. This is logical in view of the fact that the east end of the building has almost a solid reinforced concrete shear wall, while the west end is practically free of any shear-resisting element.

One of the most critical phases of our progress in designing earthquake-resistant structures is the gathering of data, together with the critical evaluation of such data to provide more accurate design criteria. Only in recent years have truly good records been available for study, and relatively little data is available on the behaviour of buildings during an earthquake. In older buildings little of more than qualitative concepts can be derived from study of a structure that has crumbled; newer buildings that are withstanding these seismic forces have little instrumentation placed upon them to serve as stepping stones for future progress. Consequently, it is hoped that future investigations of this same sort may be extended to a wide variety of structures, to produce both a safer and more economical approach to the design of earthquake-resistant buildings.

TRANSIT MIXED CONCRETE AND BATCHED MIXES

The State of California, Department of Public Works, has released to interested persons copies of Schoolhouse Section Circular No. 1 (Revised 5-21-54), on Transit Mixed Concrete and Batched Mixes. The release is in connection with Section 713(b) Title 21, California Administrative Code, and explains the conditions under which a certification concerning the "quantity of materials" may be accepted from a public weighmaster in lieu of the continuous plant inspection.

It includes the form for the public weighmaster affidavit, and a sample load ticket.

ENGINEERING FIRM ORGANIZED

LeRoy Crandall, Frederick Barnes, and Leopold Hirschfeldt have formed the firm of LeROY CRAN-

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DALL & ASSOCIATES for the purpose of engaging in the practice of consulting foundation engineering. Offices of the new firm are located at 1614 Beverly Blvd., Los Angeles 26.

SCHOOL HOUSE INSPECTORS COURSE IS COMPLETED

Approximately forty inspectors successfully completed the course for public school inspectors which was sponsored jointly by the Structural Engineers Association of Northern California and The American Institute of Architects, San Francisco Council.

Each subject was given a specialized instructor and final examination revealed the highest average marks were for inspectors with four to five years' experience.

The success of the course has led the Committee of the Engineers and Architects to sponsor a similar course in Santa Clara and Santa Rosa this fall.

A Technical Report
PORCELAIN ENAMEL CURTAIN WALLS

(From Page 23)

customary solution to this problem has been the application of some sort of caulking compound applied to areas or spaces where water was likely to penetrate. This method has proved effective only up to a point; this point being the maintenance of such weather seal. Maintenance is in direct ratio to:

(1) cost of material re-application
(2) cost of labor and scaffolding in this re-application

CRITERIA FOR SEALING COMPOUND

a. waterproof; b. vapor-proof; c. no rot; d. sun-resistant; e. long life — at least 50 years under all weather conditions; f. low cost; g. light in weight; h. ice resistant; i. oil and acid resistant; j. elastic—to withstand the expansion and contraction of the porcelain enamel panels; k. flexible enough to make a 90° bend; l. withstand 80° fahrenheit temperature change; m. two pieces to be bonded to each other.

Mr. Lescaze's investigation of caulking and gasketing materials led him to the following conclusions:

(1) Caulking compounds cannot be relied upon for long-life expectancies
(2) Caulking compounds of the better types are at present far too expensive
(3) It is not possible to use caulking today without the probability of high maintenance costs
(4) Vinyl gaskets, either preformed or extruded, offer: a. longer life; b. less maintenance; c. lower cost; d. neater and cleaner design appearance; e. greater resistance to climatic conditions.

FACTORS RELATED TO ADHESIVES

At the outset, the use and application of adhesives in a prefabricated, laminated, porcelain enamel curtain wall were predicated upon two basic concepts:

a. Holding the inside and outside porcelain enameled steel skins of the panel to a core, thus achieving a laminated sandwich.
b. Keeping the skins as flat as possible.

To accomplish this, the following criteria were established:

CRITERIA FOR ADHESIVES

(1) low cost; (2) ease of application; (3) reasonable setting time; (4) ability to withstand the expansion and contraction of the panel without loss of adhesion; (5) ability to withstand temperature cycling without failure; (6) adequate glue line in no more than two applications; (7) waterproof; (8) long life—minimum 50 years.

As a result of his investigation of adhesives, Mr. Lescaze reached the following conclusions:

(1) It is entirely possible that certain core materials can be bonded to porcelain enameled steel skins without any other physical holding device, with no fear of delamination.
(2) Adhesives can and will do the job of keeping the porcelain enameled steel skins flat when bonded to a rigid or semi-rigid core material.
(3) Most adhesives meet satisfactorily the 8 items listed as criteria.

CLOVERLEAF QUAD HANGARS

(From Page 26)

private installations on ranches — quads have been used as double garages, workshops, offices and for various other purposes.

These hangars, comparable in price to the conventional T-hangar, are sold as a complete unit. Prefabricated, they can be built and ready for use in approximately six weeks after order. This includes complete engineering service, construction to include labor, and even aid in financing.

**NOTE: The author of this article, Milo S. Gates of the Bishop, Younger, Bradley Co., is a graduate Mechanical Engineer and MBA of the Stanford School of Business Administration, and has had a wide variety of experience in the construction industry.*

OPENS ENGINEERING OFFICE

LeRoy Crandall recently announced the opening of offices in Los Angeles for the specialized field served by a Consulting Foundation Engineer.

ARCHITECTS PARTICIPATE IN STANFORD UNIVERSITY CLINIC

The fourth annual School Planning Institute, scheduled to be held at Stanford University, July 12 to 16, and sponsored by Stanford University's School of Education, will feature a number of well known architects.

Among those taking part in Institute programs

featuring the theme of "Planning for Tomorrow's Secondary Schools" will be Mario J. Ciampi, A.I.A., representing the Northern California Chapter A.I.A., and Walter Stromquist, A.I.A., representing the Coast Valleys Chapter, A.I.A.

The Institute will cover junior and senior high school and junior college educational specifications, economies in school construction, designing for special instructional areas, and improvement of learning through better planning.

An exhibit of school building design by Bay Area architects will be held in conjunction with the conference.

UNIVERSITY OF CALIFORNIA ARCHITECTURAL EXHIBIT

The College of Architecture, University of California at Berkeley, in cooperation with the City of Berkeley Department of City and Regional Planning, the Department of Art, the Department of Decorative Arts, and the Department of Landscape Architecture, held an exhibit of work in the patio of the College of Architecture, University of California.

The event is an annual observation of work and awards of the students.

AMERICAN INSTITUTE OF ARCHITECTS CONVENTION

Among highlights of the recent American Institute of Architects annual convention in Boston, was the awarding of Honorary Corresponding Memberships of the Institute to Arthur J. C. Paine, President of the Royal Architectural Institute of Canada; Carlos E. DaSilva, President of the Philippine Institute of Architects; and Augustin S. Vasquez, President of the Colegio Nacional de Arquitectos de Cuba.

Howard M. Robertson, President of the Royal Institute of British Architects, was made an Honory Corresponding Member in 1929, and Pedro Ramirez Vasquez of the Mexican Society was elected in 1953.

Winners of the Arts Festival Award (New England) included George W. W. Brewster and Carleton Richmond, Jr., and Hugh Stubbins Associates, Honorary Awards.

AUSTRALIAN ARCHITECTS VISIT WEST COAST

A team of 21 architects, contractors and material manufacturers from Australia were recent visitors to the West Coast, arriving at San Francisco's International Airport on a flight direct from their homeland.

A busy sight-seeing schedule of construction projects and modern architectural buildings comprised the group's four-day stay in the Bay Area and then the return trip was made with the first stop scheduled for Honolulu.

Among those sponsoring the tour were the San Francisco Chapter A.I.A.; Associated Home Builders of San Francisco; Structural Engineers Association of California; Associated General Contractors of America, Central California Chapter; Consulting Engineers Association of California; Building Board, the San Francisco Chamber of Commerce and others.

WINEGAR APPOINTED ASSISTANT ALASKA DISTRICT ENGINEER

Col. W. E. Winegar, for the past year executive officer of the Alaska District, Corps of Engineers, has been named to the post of Assistant District Engineer, according to a recent announcement.

Col. Winegar has a notable military engineering record in both peace and war years. Born in Salt Lake City, Utah, in 1914, he studied mechanical engineering for four years at the University of Utah prior to attending the U. S. Military Academy from which he graduated in 1939.

ARCHITECTURAL FIRM DISSOLVES

The architectural firm of Ward & Bolles, San Francisco, announces it will be dissolved as of July 15, 1954.

J. Francis Ward will carry on the practice of architecture from the firm's present address, 215 Leidesdorff street, under the name J. Francis Ward, A.I.A., Architect, and Ralph W. Jenson, A.I.A., architect will be-

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come associated with Ward.

John S. Bolles will establish offices at 918 Harrison street, San Francisco, where he will engage in the general practice of architecture under the name of John S. Bolles, A.I.A., Architect.

GREEK GOVERNMENT SEEKS EARTHQUAKE INFORMATION

The Structural Committee for the Ionian Islands has asked the Structural Engineers Association of Southern California to send any material available on the subjects of earthquakes.

The request says, "Facing the problems of the recent earthquakes in Ionian Islands, Greece, and concerned with the plans of reconstruction of the devastated areas, we would appreciate an interchange of information with you referred basically to data on the behaviour of soils under tremor and to suggestions for the anti-earthquake design of structures."

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ALASKA CONSTRUCTION

Four contracts totalling nearly $7,000,000 for defense construction at Army and Air Force bases, were recently awarded by the Alaska District, Corps of Engineers.

Firms awarded contracts have orders to proceed within thirty days and new construction will start rolling fast on these job sites at the Army Port of Whittier, at Eielson Air Force Base in the Fairbanks area, and two more projects on Elmendorf Air Force Base.

Awards were made to the Patti-MacDonald Construction Company of St. Louis, Missouri; the Montgomery Electric Company of Portland, Oregon; L. E. Baldwin, Inc. of Seattle; and the Birch-Lytel-Green firm of Seattle.

CENTRAL CALIFORNIA CHAPTER ASSOCIATED GENERAL CONTRACTORS

In marking its twentieth anniversary in the building industry, the Central California Chapter of The Associated General Contractors of America, Inc., also gains national recognition as the largest Chapter of the AGC in America.

Activity of its members extend throughout the world and represent every kind of building construction including huge commercial and industrial installations for both private and public owners, and large and small development contracts for multiple house building and shopping centers.

Bruce McKenzie, managing director of the Chapter, points out that "geographically, the membership extends from Bakersfield in the San Joaquin Valley northward to the Oregon border."

BURKE W. TAYLOR JOINS WELTON BECKET

Burke W. Taylor, office planning consultant, has become a full time associate member of the architectural firm of Welton Becket, F.A.I.A., and Associates, according to a recent announcement by Welton Becket.

Taylor's background includes management of some of Seattle's larger office buildings; association with the Metropolitan Building Co, Stimson Realty Co; and is credited with a majority layout of the Statler Center Office Building, and three floors of the Fireman's Fund Insurance Co, both of Los Angeles.

The price received by petroleum companies for gasoline is today equivalent to the price received 30 years ago—BUT, 35 per cent of today's price represents State and Federal taxes which the customer pays.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

COMMERCIAL BUILDINGS. An Architectural Record Book. Architectural Record, 119 W. 40th Street, New York 18. Price $9.75

Prepared and edited by the staff of the Architectural Record, the book covers the subject of office buildings, banks, transportation buildings, radio and TV buildings and theatre buildings. Points out the fact that in plan, appearance, and equipment, today's buildings possess a newness which is more than superficial novelty.

New concepts, new motives, new needs have resulted in buildings of type and design that were embryonic or even unheard of just a few years ago. The vital need for economy in construction has produced new buildings—shorn of gingerbread and fripperies—whose beauty lies in their integrity, their mating of design and function.

A cross-section of new commercial buildings which best demonstrate these advances of concept and design have been selected, no special building type has been singled out, but the work of more than 100 architects has been included in this book. Many photographs and drawings are used, and the book is of interest to anyone interested in the design and construction field.

MATTER ENERGY MECHANICS. By Dr. Jacob Mandelker. Philosophical Library, 15 E. 40th Street, New York 16. Price $4.75

This book is based on the energy concept of matter. It unifies and extends relativity mechanics by introducing a new kinetic energy formula. This new formula follows from the fact that the motion of a body whose mass increases with velocity is equivalent to motion with resistance. As a consequence, the work performed is not as commonly supposed equal to the kinetic energy, but must always be greater.

Matter Energy is an extension of the mechanics originated from the relativity theory and in no way violates the existing concepts of that theory. The importance of a rectified and completed mechanics can hardly be over estimated for further progress and development in this atomic age.

ROOFS FOR THE FAMILY. By Eva Burmeister. Columbia University Press, Morningside Heights, New York 27. Price $3.25

Building a Center for the Care of Children. The author, in a book warm with good sense and rare understanding, tells why and how she and the "family—of forty-five children —" moved from a single 19th-century mansion of Victorian architecture into three modern, streamlined cottages, giving psychologically sound reasons for preferring cottages to life in a congregate building, for electing to place together children of the same age, for bringing into the new way of living much from the old.

"There was more to our project," says Miss Burmeister, "than piles of lumber, vats of cement, tubs of tar, and pails of paint."

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

What You Should Know About Room Air Conditioners. A 28-page booklet printed in non-technical terms gives better understanding of modern room air conditioning in general, what air conditioning is, and what should be expected from a room air conditioner.

Contains fifty topical headings and gives short, concise answers to hundreds of air conditioning questions. Booklet available by writing DEPT-A&E, Dearborn Stove Co., Box 5527, Dallas, Texas.

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SEATTLE, WASH. . . . . WHITE-HENRY-STUART BUILDING

CATALOGUES — Available

from 25w. to 100w. Tables are given for computing proper distribution and wattage. For copy of Bulletin C (A.I.A. File 31-F-2) write DEPT-A&E, Pittsburgh Reflector Co., 487 Oliver Bldg., Pittsburgh 22, Pa.

Brownskin tarpaulins. Will do most of the jobs now being done by canvas at a fraction of the cost; heavily reinforced (1/4"x1/4" glass scrim), orlon thread sewn seams, cemented for waterproofness, double thick cemented edges, grommets on all four sides for tie-down; ideal cover for building materials, machinery, merchandise, and extension of outdoor storage. Manufactured by and complete information from DEPT-A&E, ANGIER PACIFIC CORPN., 55 New Montgomery St., San Francisco.

Booklet on characteristics of cement. A new brochure explaining characteristics of the 5 basic types of portland cement, as well as a number of specialty cements, entitled "There's a Calaveras Cement for Every Use"; also has a consolidated summary of Federal Government and ASTM specifications. Publication points out that more than 98% of all cement produced in the U.S. is portland cement. For free copy write DEPT-A&E, Calaveras Cement Co., 315 Montgomery St., San Francisco 4.

Audio-Visual call systems. How modern hospitals are relieving the nursing shortage and reducing per-bed operating costs through the use of audio-visual call systems is explained in a new 16-page brochure. It describes how the call system enables the nurse to find out the patient's needs without leaving her post, thus saving her half the usual steps and permitting her to concentrate on direct bedside care. Bulletin describes installation procedures, wiring diagrams, a complete guide to specification writing, and a list of hospitals where system is installed. Write for a free copy, DEPT-A&E, Auth Electric Co., Inc., 34-20 - 45th St., Long Island City 1, N.Y.

Water level control valves. New 24-page catalog contains complete data on McDonnel boiler feeders, low water cut-offs, pump controllers and relief valves; covers special adaptations and components that have been developed including float operated valves and switches. Table of contents and index arranged in tabular form for ready comparisons. Copy available by writing DEPT-A&E, McDonnell & Miller, Inc., 3500 N. Spaulding Ave., Chicago 18.

Residential cooling towers. A completely new residential cooling tower catalog which describes in detail the mechanical, physical and operating characteristics of residential cooling towers for air conditioning is now available. This 8-page catalog describes towers which conserve over 95% of the cooling water used in air conditioning systems, presenting graphically tower capacities for various wet bulb temperatures. Indoor and outdoor tower installations are both shown in full page line diagrams. Details of construction also include a description of the manufacturer's famous 20-year guarantee against rotting of the wetted deck surface due to attack by fungus growth. Copies available by writing DEPT-A&E, Halstead & Mitchell, Bessemer Bldg., Pittsburgh, Pa.

How, why and when. A new bulletin describes the how, why and when to use gas-fired unit heaters; hand pocket size 20-page booklet gives hints on heater selection and installation, a schematic diagram explaining how a gas unit heater works, a heating survey outline, instructions for estimating heat loss and computing gas line requirements and a summary of the advantages of gas unit heating. Copies may be obtained by writing DEPT-A&E, Reznor Mfg. Co., Mercer, Pa.

Pipe and fittings. A new 1954 pipe and fittings catalog beautifully illustrated in two colors is designed to acquaint dealers and users with a complete line of prefabricated ducts and fittings for heating and cooling systems; represents over 1250 fittings including baseboard diffuser adapters, collars, dampers, ducts, elbows, stacks, stackheads, tee joints and transition pans. Large drawings in this 32-page catalog show duct and fitting installations—extended plenum systems, simplified systems and perimeter systems; installation procedure; helpful engineering data and examples of how to determine pipe sizes to make installation simple, easy and quick. Separate section devoted to list prices for estimating jobs. Write DEPT-A&E, The S. C. Baer Co., 1600 Times Star Tower, Cincinnati 2, Ohio.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Clear Glazed—
2 x 6 x 12 Furring ..... $2.00 per sq. ft.
4 x 6 x 12 Partition ..... 2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 3.00 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dampcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... 4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $12.55
8-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull brass plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.15
Carload lots, in bulk, per bbl. 3.87
Cash discount on carload lots, 10c a bbl., 10th Prox., less then carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White ..... (1 to 100 sacks, $3.60 sack warehouse or del.; $9.32 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 4-yd. loads:
Per cubic Yard, 1-8 Mix $11.20
1-7 Mix 11.45
1-6 Mix 12.15
1-5 Mix 13.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.62

Haydite Aggregates—
¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnasite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	33/32x2¼ $	½x2 $	⅜x2 $	¼x2 $
Clear Qtd., White	425	405		
Clear Qtd., Red		405	380	
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381.00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—
33/32 x 2¼ First Grade $390.00
33/32 x 2¼ 2nd Grade 365.00
33/32 x 2¼ 2nd & Btr. Grade 375.00
33/32 x 2¼ 3rd Grade 240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM 380.00
33/32 x 3½ 2nd & Btr. Jtd. EM 390.00
33/32 x 2¼ First Grade 400.00
33/32 x 2¼ 2nd Grade 360.00
33/32 x 2¼ 3rd Grade 320.00
Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired
Floor Furnace, 25,000 BTU ..... $ 70.50
35,000 BTU 77.00
45,000 BTU 90.50
Automatic Control, Add 39.00
Dual Wall Furnaces, 25,000 BTU 91.50
35,000 BTU 99.00
45,000 BTU 117.00
With Automatic Control, Add 39.00
Unit Heaters, 50,000 BTU 202.00
Gravity Furnace, 65,000 BTU 198.00
Forced Air Furnace, 75,000 BTU 313.50
Water Heaters—5-year guarantee
With Thermostat Control,
20 gal. capacity 87.50
30 gal. capacity 103.95
40 gal. capacity 120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-S1S $135.00
½-inch, 4.0x8.0-S1S 219.00
¾-inch, per M sq. ft. 292.00
Plyscord ..... 11½c per ft.
Plyform ..... 25c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $43.50
Standard Ribbed, ditto $47.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high. oer lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard 85c
Three-coat work ..... per yard $1.10
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (8asis 7¾ lbs. per gal.)	Wholesale Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (8asis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	Pr. per pkg.	Price to Painters per 100 lbs.	Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

$00 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..$13.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square.. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.4
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 pe sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.25
Vented hip skylights, per sq. ft. 2.25
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(Installed and glazed), per sq. ft... 1.85

STEEL—STRUCTURAL—

$290 per ton erected, when out of mill $350 per ton erected, when out of stock

STEEL REINFORCING—

$200.00 per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.9
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.8
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.5
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.2
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.1
1 in. & up (Less than 1 ton) 7.1
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.20 to $1.6 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.35 pe sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile @ $1.50 to $1.65 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .6
Rubber tile, per □ ft. ..... $ .55 to $ .7

Furring Tile

	Scored	F.O.B. S. F
12 x 12, each		$ .1

Kraftile: Per square foot

	Small Lots	Larg Lot
12 x 12 x ⅞-inch, plain	$ .40	$ .3
6 x 12 x ⅞-inch, plain	.44	.3
6 x 6 x ⅞-inch, plain	.46	.4

Building Tile—

8x5½x12-inches, per M	$139.5
6x5½x12-inches, per M	105.0
4x5½x12-inches, per M	84.0

Hollow Tile—

	F.O.B. Plant
12x12x2-inches, per M	$146.2
12x12x3-inches, per M	156.8
12x12x4-inches, per M	177.1
12x12x6-inches, per M	235.3

VENETIAN BLINDS—

75c per square foot and up. Installatio extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 0126B
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7B34
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7B34

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2. RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St.; KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 333 Montgomery St., DO 2-3883
Los Angeles 13: 601 West Fifth St., MI 6294

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

HIGH SCHOOL, Hillsdale, San Mateo County. San Mateo Union High School District, San Mateo, owner. Structural steel frame and steel deck, wall panels, metal sash; 43 classrooms, 4 shop buildings, 3 home making, arts, crafts, library and cafeteria; music room and auditorium, boys and girls gymnasium, swimming pool, toilet rooms, $3,607,500. ARCHITECT: John Lyon Reid, San Francisco. GENERAL CONTRACTOR: Rothschild, Raffin & Weirick, San Francisco.

HOTEL AND CASINO, Las Vegas, Nevada. Gensbro Hotel Corp., Las Vegas, owner. Nine story, 313 room, hotel with casino and dining room; reinforced concrete, $3,500,000. ARCHITECT: Roy Franc and Son, Miami, Florida. J. Maher Weller, Las Vegas, resident architect. GENERAL CONTRACTOR: Taylor Construction Co., Las Vegas.

MOTEL, Sunset Blvd., Los Angeles. Trave-Lodge, San Diego, owner. Will build 40-unit, 2-story, frame and stucco motel; 22 x 220 ft., composition and rock roofing, concrete slab, carpeted, asphalt tile and ceramic tile floors, interior plaster work, single gas wall heaters, central gas water heating, tile baths and stall showers, galvanized iron gutters and downspouts, wrought iron railing, swimming pool, asphaltic concrete paving, $100,000.

HIGH SCHOOL ADD'N., Newhall, Los Angeles county. Newhall Union High School District, Newhall, owner. Addition to William S. Hart High School administration and library building, frame and stucco construction, composition roofing, slab and asphalt tile floors, heating and ventilating, acoustical work, metal sash, toilets, metal toilet partitions, sheet meal, electrical work, $134,900. ARCHITECT: Walker, Kalionzes & Klingerman, Los Angeles. GENERAL CONTRACTOR: Howard F. Layne, San Fernando.

WAREHOUSE, North Hollywood, Los Angeles county. Industrial Properties North Hollywood, owner. Concrete block warehouse, composition roofing, concrete slab floor, structural and reinforcing steel, steel sash, electrical and plumbing work, 29,300 sq. ft., $114,000. ENGINEER: C. F. Ewald and Robert O'Hanlon, Burbank. GENERAL CONTRACTOR: John D. Howard, Burbank.

MERCY HOSPITAL ADD'N, Bakersfield, Kern county. Mercy Hospital, Bakersfield, owner. 4-story, type 1, reinforced concrete, aluminum sash, metal stud and lath partitions, terrazzo, asphalt tile, air

conditioning, masonry, incinerator, elevators, dumb-waiter, cubical curtains, refrigeration boxes, kitchen equipment, paving site work, facilities for 68 beds, $1,250,000. ARCHITECT: Frank A. Georgeson and Frank W. Trabucco, Associated, San Francisco. GENERAL CONTRACTOR: James I. Barnes, Redwood City.

117 DWELLINGS, Van Nuys, Los Angeles county. Kristle Marie Park, Inc., Burbank, owner. 5-room, frame and stucco dwellings in Van Nuys area; composition roofing, concrete slab, asphalt tile, dry-wall interior, sliding sash, wall heaters, one and two baths, composition tile wainscoting, electric heaters, double sinks, garbage disposals, laminated plastic counter tops, fans, garages, 45x56 sq. ft., $1,000,000. ARCHITECT: Gilbert Leong, Los Angeles. GENERAL CONTRACTOR: Self.

HIGH SCHOOL ADD'N, Paradise, Butte county. Paradise Unified School district, Paradise, owner. Reinforced concrete, frame and stucco; cafeteria, music and combination assembly room, $315,313. ARCHITECT: Koblik & Fisher, Sacramento. GENERAL CONTRACTOR: Ralph Larsen & Son, San Francisco.

CHURCH & SOCIAL HALL, Visalia, Tulare county. First Christian Church, Visalia, owner. Frame and stucco construction, Church and Social Hall, $148,975. ARCHITECT: Robert C. Kaestner, Visalia. GENERAL CONTRACTOR: Lindquist & Lindquist, Visalia.

SUNDAY SCHOOL BLDG., Rosemead, Los Angeles County. Community Methodist Church, Rosemead, owner. 2-story, 8-room frame and stucco Sunday School building; 9520 sq. ft. floor space, asbestos shingle roofing, wood and metal double hung sash, concrete slab and wood floors, asphalt tile flooring, interior stucco, single wall furnaces, toilet facilities — $65,000. STRUCTURAL ENGINEER: Leon Stein and Roland Foreman, Los Angeles. GENERAL CONTRACTOR: John M. Barr, Rosemead.

OFFICE & WAREHOUSE, Emeryville, Alameda County. Union Oil Company, Emeryville, owner. 1-story concrete block and structural steel office and warehouse;

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	3.00	3.00	3.00	3.00	3.00
REINF. STREET	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.40
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

*6 Hour Day. **7 Hour Day. *** Before C.I.S.C for 15c increase.

Prepared and compiled by:

CENTRAL CALIFORNIA CHAPTER, ASSOCIATED GENERAL CONTRACTORS OF AMERICA, with the assistance and cooperation of secretaries of General Contractors Associations and Builders Exchanges of Northern California; and the above information for southern California is furnished by the Labor Relations Department of the Southern California Chapter, ASSOCIATED GENERAL CONTRACTORS OF AMERICA.

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wood roof, composition roofing, concrete floors, floron in offices, 9,000 sq. ft. floor space — $62,499. ARCHITECT: H. A. Bruno and Robert J. Bettancourt, Oakland. GENERAL CONTRACTOR: Fletcher Const. Co., Oakland.

SHERIFF STATION, Los Angeles County. County Board of Supervisors, Los Angeles County, owner. Complete facilities for a Sheriff's office and station—$368,194. ARCHITECT: James H. Garrott, Los Angeles. GENERAL CONTRACTOR: Beckner Const. Co., Los Angeles.

AUTO SALES & SERVICE BLDG., Reno, Nevada. Walgren Motor Co., Reno, owner. 1 story concrete block and frame construction — $69,696. ARCHITECT: Edw. S. Parsons, Reno. GENERAL CONTRACTOR: Weil Const. Co., Reno.

OFFICE & LABORATORY, Oakland, Alameda County. General Metals Corpn., Oakland, owner. 1 story frame and stucco, 4000 sq. ft. floor space; aluminum sash, wood floors, rubber tile floors, composition roofing — $70,000. ARCHITECT: Keith Cameron Reid, Richmond. GENERAL CONTRACTOR: Greuner Const. Co., Oakland.

PAROCHIAL SCHOOL, San Fernando, Los Angeles County. Roman Catholic Archbishop of Los Angeles, owner. Reinforced concrete block 8-classroom school building for Santa Rosa Parish; 33x257 feet, composition roofing, concrete slab and asphalt tile floors, interior stucco, toilet rooms with ceramic tile wainscoting, metal toilet partitions, metal casements, bronze screens. ARCHITECT: Ayres & Feige, North Hollywood. GENERAL CONTRACTOR: Hixon Bros., Van Nuys.

FOOTBALL FIELD and bleachers, High School, Los Gatos, Santa Clara County. Los Gatos Union High School District, Los Gatos, owner. Water distribution system, soil preparation, seeding, sprinkling system; installation of permanent steel bleachers—$174,678. ARCHITECT: Gifford E. Sobey and W. Newlen and John Lyon Reid. GENERAL CONTRACTOR: S. & Q. Const., San Francisco.

WAREHOUSE REMODEL, Broadway Shopping Center, Walnut Creek, Contra Costa County. MacDonald Products Co., San Francisco, owner. Warehouse building 100x150 ft., reinforced concrete tilt-up construction, 1 story with mezzanine; occupant Sears-Roebuck & Co.—$133,000.

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ARCHITECT: Robert B. Liles, San Francisco. GENERAL CONTRACTOR: Burnham Const., Oakland.

SAND PROCESSING PLANT, Ione, Amador County. Owens-Illinois Glass Co., Oakland, owner. Structural steel frame, concrete and concrete block construction; mechanical equipment and conveyor equipment—$400,000. GENERAL CONTRACTOR: H. K. Ferguson, San Francisco.

LABOR TEMPLE, Long Beach, Los Angeles County. Laborers & Plaster Tenders Local 507, Long Beach, owner. Frame and stucco meeting hall and offices, composition roofing, concrete and asphalt tile floors, forced air heating, heating and air conditioning, steel projecting sash, toilet rooms, ceramic tile work, interior plaster and wood paneling, acoustic plaster ceilings, 6-ft. masonry wall around building, asphalt parking area; building 7000 sq. ft. ARCHITECT: Hugh Gibbs, Long Beach. GENERAL CONTRACTOR: Lacy Johnson, Lakewood.

STADIUM BLEACHERS, Albee Stadium, Eureka, Humboldt County. Eureka Board of Education, Eureka, owner. Installation of westside bleachers in Albee Stadium—$211,997. ENGINEER: I. Nelidov, San Francisco. GENERAL CONTRACTOR: A. C. Johnson & Son, Eureka.

HOSPITAL ADDITION, Alta Vista Hospital, Pasadena, Los Angeles County. Lutheran Good Samaritan Society, Pasadena, owner. 3-story and basement addition to provide 50 additional beds and facilities; surgical, kitchen, dining room, staff rooms; 20,250 sq. ft. floor space; reinforced concrete construction, composition roofing, concrete floors, steel sash, air conditioning system, call system, oxygen piping system, metal doors, acoustical tile, interior plaster, elevator, conductive floor covering, electrical, plumbing, sheet metal, and area paving — $528,790. ARCHITECT: J. Dewey Harnich, Ontario. GENERAL CONTRACTOR: Ford J. Twaits Co., Los Angeles.

ELEMENTARY SCHOOL, near Red Bluff, Tehama County. Antelope Elementary School District, Red Bluff, owner. Frame and stucco elementary school building: 3 classrooms, kitchen, kindergarten, multi-purpose, toilet rooms — $155,736. ARCHITECT: Clayton Kantz, Redding. GENERAL CONTRACTOR: Liston Ehorn, Red Bluff.

HOTEL, Highway 91, Las Vegas, Nevada. Hotel Deauville Corpn, Las Vegas, owner. 2-story building will contain 200 rooms, casino, theater, dining room and 210 baths; cinder block construction, composition roof, asphalt tile, carpeting, air conditioning, asphalt paving, elevators, fire doors, glass doors, insulation, ornamental iron, plaster, plate glass, steel sash, vault doors, ceramic tile, terrazzo, steel roof trusses, refrigerators—$2,250,000. ARCHITECT: John Replogle, Las Vegas. GENERAL CONTRACTOR: McNeil Construction Co., Los Angeles.

TELEPHONE BLDG., Santa Ana, Orange County. Pacific Telephone & Telegraph Co., Los Angeles, owner. Concrete frame, masonry filler walls Bristol Telephone building; 65x117 feet in area, composition roofing, slab and asphalt tile floors, acoustical work, plastering, metal sash, structural steel work, electrical, plumbing, sheet metal. ARCHITECT: Parkinson, Powelson, Briney, Bernard & Woodford, Los Angeles. GENERAL CONTRACTOR: Walter J. Markel, Santa Ana.

BANK BLDG., Oroville, Butte County. Bank of America, San Francisco, owner. 1 story with mezzanine; reinforced concrete and frame construction—$124,387. GENERAL CONTRACTOR: Don Da Roza, Inc., Dutch Flat, California.

ENGINE HOUSE NO. 29, San Francisco. City and County of San Francisco, San Francisco, owner. 2-story reinforced concrete construction; plumbing, heating, electrical work—$158,870. ARCHITECT: Charles W. Griffiths (City Architect), San Francisco. GENERAL CONTRACTOR: S. J. Amoroso Const. Co., San Francisco.

HIGH SCHOOL BUILDING, Central Valley, Shasta County. Shasta Union High School District, Redding, owner. New High School building comprising classrooms, administration offices, science rooms, home making, shops building, gymnasium, toilet rooms—$637,280. ARCHITECT: Charles F. Dean, Sacramento. GENERAL CONTRACTOR: Riverman & Sons, Portland, Oregon.

MERCY HOSPITAL ADD'N, Bakersfield, owner. 4-story, type 1, 68-bed addition, including facilities for administration, X-ray, surgery, maternity and laboratory; reinforced concrete, metal windows, metal stud partitions, metal door frames, 2 elevators, asphalt tile and terrazzo floors, air conditioning—$1,203,700. ARCHITECT: F. T. Georgeson & F. W. Trabucco Associates San Francisco. GENERAL CONTRACTOR: James I. Barnes Const., Redwood City.

NEWSPAPER BUILDING, Morning News, San Leandro, Alameda County. Morning News Publishers, San Leandro, owner. 1-story reinforced concrete (tilt-up) construction, 13,500 sq. ft.; wood roof trusses, wood roof, steel sash, plate glass, asphalt tile floors — $91,726. ARCHITECT: E. D. Cerruti, Oakland. GENERAL CONTRACTOR: Samson Const. Co., Oakland.

BANK BLDG., Las Vegas, Nevada. First National Bank of Nevada, Las Vegas, owner. Branch bank building, cement block construction, composition roofing, structural steel work, slab floor, metal sash, plate glass, air conditioning, insulation, electrical, plumbing. ARCHITECT: Ferris & Erskine, Reno. GENERAL CONTRACTOR: Leslie Elson Co., Las Vegas.

WATER TREATMENT PLANT, Fort Richardson, Alaska. U. S. Corps of Engineers, Anchorage, Alaska, owner. Complete water treatment plant to serve Fort Richardson—$793,269. GENERAL CONTRACTOR: Paul N. Fackler & Co., Mountain View, Alaska.

SCHOOL ADM. BLDG., San Mateo. San Mateo Elementary School District, San Mateo, owner. 1-story steel frame and frame and stucco building of 5000 sq. ft. floor area; concrete roof — $61,228. ARCHITECT: Clarence Cullimore, Jr., San Mateo. GENERAL CONTRACTOR: Stevenson-Pacific Co., Redwood City.

HIGH SCHOOL REHABILITATION, Fresno. Fresno Unified School District, Fresno, owner. Rebuild auditorium includ-

ing walls; install new lighting, acoustical treatment, new stage block, asbestos shingle roof, revamp electrical system—$483,000. ARCHITECT: Charles H. Franklin, Fresno. STRUCTURAL ENGINEER: H. Wayne Taul, Fresno. GENERAL CONTRACTOR: Midstate Const. Co., Fresno.

PRESS BOX, Santa Anita Park, Arcadia, Los Angeles County. Los Angeles Turf Club, Inc., Arcadia, owner. Steel frame and transite press box, 4000 sq. ft. in area; composition roofing, concrete slab and asphalt tile covered floor; openable plate glass windows, toilet facilities, photography equipment, announcer facilities; restaurant, bar, kitchen—$135,534. ARCHITECT: Roland E. Coate, San Marino. GENERAL CONTRACTOR: Christie Co., Arcadia.

IN THE NEWS

ELECTRONIC PLANT IS EXPANDING

A new $500,000 administration-engineering building is being erected for the Librascope Company of Glendale, by the contracting firm of Bibb, Remmen & Bibb.

The building is addition to present facilities and will add 52,000 sq. ft. of floor space. It was designed by Claud Beelman & Associates, Los Angeles architects and engineers.

ARCHITECTURAL OFFICES MOVED

The architectural firm of Kress & Gibson of San Jose has moved to 363 Park Avenue, San Jose. Former address was 515 First National Bank building.

RESIDENTIAL DEVELOPMENT

The Lang Realty Co. of San Francisco recently started construction of a residential district near Novato in Marin county.

More than 1000 homes costing approximately $10,000 each will be built according to present plans.

HORSE BARNS FOR RACE TRACK

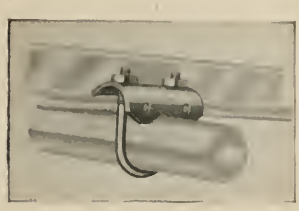
Architect Clarence W. W. Mayhew of San Francisco is completing drawings for the construction of a group of horse stables at Golden Gate Fields race track in Albany, California. The barns are of frame construction.

ARCHITECT SELECTED

The architectural firms of Skidmore, Owings & Merrill, San Francisco office has been commissioned by the Anglo California National Bank of San Francisco, to design and develop specifications for the construction of a new bank building to be built in the Broadway Shopping Center near Walnut Creek in Contra Costa County.

NEW TYPE PIPE SUPPORT

The new right angle UBOLET Spedon pipe support is designed for use with standard pipe or rigid steel conduit for mounting on structural flanges up to ⅞" thick; body made of heavy gauge pressed steel, hardened by special process combines an unusually hard and corrosion resistant surface with a flexible inner core. Sharp biting edges at corners are further apart than the U-bolt legs and provide self equalizing bite pressure and better stability.



The Spedon retains a constantly effective clamping tension in the U-bolt provided by the saddle spring action, making it ideal for heavy-duty industrial applications. Bodies for sizes 1¼"-1½" can use either size U-bolt. Each is furnished with zinc-coated U-bolt and nuts assembled ready for use; available ¾" to 2" pipe sizes. Complete data Spedon Pipe Clamp Co., 33-51 60th Place, Woodside 77, N. Y.

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A new mail box arrangement for apartment houses in stainless steel, plain steel, or brass fronts to suit individual requirement; available in two models, with or without, push button for each receptacle; supplied in gangs of from 3 to 13 within one frame.

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BREWERY TO EXPAND

The Lucky Lager Brewing Company will soon start work on enlarging facilities of their San Francisco plant.

Architects Meyer & Evers, San Francisco, are completing plans for construction of new cellars, a 3-story building, and an office building. The estimated cost of construction is $1,400,000.

ARCHITECT SELECTED

Architect Wm. Hastrup of Fresno has been commissioned by the Anglo Califor-

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nia National Bank, San Francisco, to design and prepare specifications for the construction of a new bank building in Hanford, Kings county.

The new building will be 2 story in height, with basement, and of reinforced concrete and light steel construction.

Estimated cost is $500,000.

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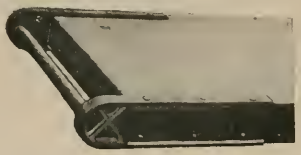
NEW LIGHTWEIGHT SCAFFOLD PLANK

A new product of aluminum-plywood riveted construction for use in a wide variety of scaffolding has been announced by Spartan Scaffolding Products, Inc., of South Gate, California.



Plywood top and bottom with riveted side walls and handgrips for protection of ends and ease in handling. Complies with all regulations of Division of Industrial Safety Relations, State of California. Available in lengths from 16 ft. to 28 ft. and widths of 12 in., 14 in., and 20 in. Light weight.

PRIVATE HOUSING DEVELOPMENT

Davis & Quigley, southern California architects, are completing plans for the construction of a large private housing project in San Diego.

The dwellings will contain 6 rooms of frame and stucco construction with wood siding and used brick veneer; wood shingles and crushed rock roofs; oak and linoleum floors, plaster walls and ceilings, metal sash, glass shower doors, ceramic tile in kitchens and bath, electric heaters, fireplaces, garbage disposals and attached garages.

Owners of the project, Modern Development Company of San Diego.

SCHOOL BONDS APPROVED

Voters of the City of Fresno Unified School District recently approved the issuance and sale of $8,500,000 in special bonds to finance the construction of additional school facilities in the city of Fresno.

OFFICE BUILDING

Architect John B. Anthony of Oakland is working on plans and specifications for the construction of a new office building to be built in Oakland at an estimated cost of $650,000.

The building will be 4 stories in height; reinforced concrete construction, glass front, aluminum window frame, 2 elevators, and asphalt tile flooring.

ARCHITECT SELECTED

Architects Falk & Booth of San Francisco have been commissioned by the Lodi Union High School District to design a new High School building to be built in the City of Lodi.

A special school bond issue of $2,300,000 was approved by voters of the district to supply funds for the project.

HOSPITAL BONDS APPROVED

Voters of the City of Palo Alto recently approved issuance and sale of $4,000,000 in bonds for the purpose of constructing a new 200-bed hospital addition to the Palo Alto General Hospital.

METHODIST CHURCH REMODEL STARTS

Architects Neptune & Thomas of Pasadena have completed plans for a three phase building program involving alterations to the White Temple Methodist Church in Anaheim.

The first building phase involves extensive remodeling of the Sunday School and offices; moving of interior partitions, demolition, electrical, re-location of structural

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Phase two includes construction of a post and beam, stucco and masonry fellowship hall, 40 by 112 ft. and designed for a future second story. The final phase involves remodeling of the sanctuary building.

BERKELEY CHAPEL

Architects Marsh, Smith & Powell of Los Angeles are working on drawings for the construction of a Chapel for the Pacific School of Religion in Berkeley, California.

The Chapel will be of reinforced concrete and frame construction and will cost an estimated $200,000.

SHOPPING CENTER FOR SACRAMENTO

Structural Engineer R. H. Cooley of Oakland is working on plans for the construction of a 1 story concrete block and frame Shopping Center, super market and group of stores in North Sacramento, California.

ARCHITECT SELECTED

Architect William Mooser of San Francisco has been commissioned by the Public Utilities Commission of the City and County of San Francisco to draw plans for the construction of a new Club House on the Crystal Springs Golf Course in San Mateo county. Estimated cost is $45,000.

REYNOCOUSTIC APPOINTS WESTERN ASBESTOS CO.

Western Asbestos Company has been appointed as a franchised applicator for the new Reynocoustic System, an advanced type of noise control recently introduced by Reynolds Metals Company, according to Gene Renner, district manager of Reynolds.

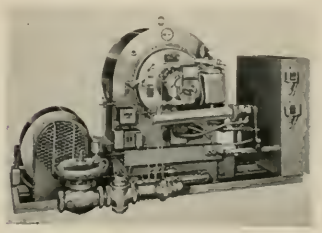
Complete engineering and sales service on the new acoustical ceiling will be offered by Western Asbestos Company.

ENGINEERING FIRM ORGANIZED

LeRoy Crandall, Frederick Barnes and Leopold Hirschfeldt have formed the firm of LeRoy Crandall & Associates for the practice of consulting foundation engineering. Offices of the new firm are located at 1614 Beverly Blvd., Los Angeles 26, California.

RAY FORCED DRAFT PACKAGED BURNER

The Ray Forced Draft Packaged Burner is built to specifications for Scotch Marine type boilers and other types of heat receivers designed for pressurized operation for industrial-commercial heating and power application.



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ARCHITECT MOVES

Architect Alfred W. Johnson, San Francisco, has moved his architectural offices from 681 Market Street to 165 Jessie Street.

FRANK K. McDANEL, U. S. STEEL, RETIRES

Frank K. McDanel, president of the American Bridge Division, U. S. Steel Corpn, retired on June 30 following a half-century in building some of the

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Starting with the American Bridge Company as a timekeeper at the age of 15, McDanel resigned to become a day laborer for the firm which he later led as president. He attributes his success in the bridge business "to hard work and willingness to learn."

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SOUTHERN CALIFORNIA FIRM IS DISTRIBUTOR

The Southwest Air Conditioning Supply Co., Beverly Hills, has been named a California distributor for Rheem Manufacturing Co.'s heating and air conditioning line and built-in appliances, according to an announcement by Albert J. Wild, president.

The newly organized firm will operate warehouses throughout California.

SANTA BARBARA BRANCH BANK

The First National Trust and Savings Bank of Santa Barbara has been issued a building permit for $90,000 for a new branch bank to be built on the north side of the city, according to William Serumgard, president.

Raymond R. Shaw of Los Angeles is the architect.

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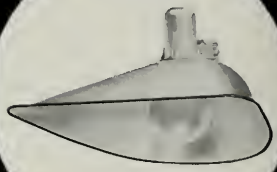

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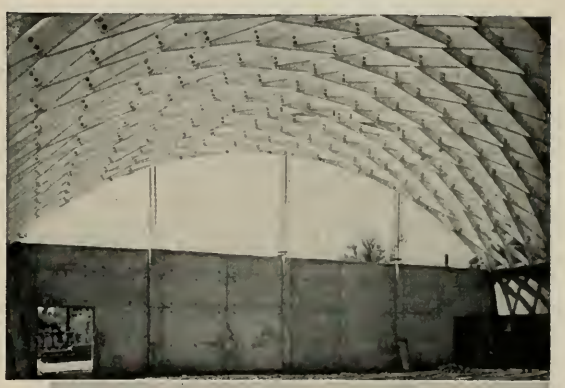

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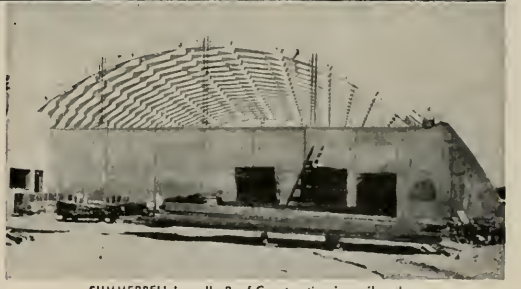

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In building this school, BAXCO Chemonited Lumber was used throughout. Treatment standards of the American Wood Preservers' Association were rigidly observed

Like other communities, Los Gatos, California, is in an area where both subterranean and dry wood (flying) termites exist. Schools and other public buildings have been attacked by these insects. For extermination, authorities have had to resort to periodic expensive fumigations—at an average cost of $150 per room. And fumigation does not protect the structure from a reappearance of the termites.

Faced with this problem in designing the new Daves Avenue School, the architectural firm of Evans & Lincoln, San Jose, California, evolved the solution of using pressure treated termite and decay resistant lumber throughout.

After a study of available wood preservatives, Mr. Evans specified that all lumber was to be pressure treated with Chemonite. This salt-type wood preservative leaves lumber clean, paintable, non-oily and odorless. It will resist all attacks by termites or rot organisms for the life of the building.

The cost for protecting the entire school structure with BAXCO Chemonited Lumber was about one and one-half times more than the cost of one fumigation, according to Mr. Evans. But since fumigations may be required every few years, the use of Chemonited (chemically preserved) wood will prove an economy in future years through lower annual maintenance costs.

To protect against termite damage for the life of the buildings, BAXCO Chemonited (pressure treated) Lumber was used for sill plates, wall studs, rafters, and sheathing.

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Please write for "BAXCO Chemonited Forest Products," our new 32-page illustrated story-in-color on the values and uses of BAXCO pressure treated structural wood.

BAXCO CHEMONITED *Pressure Treated* LUMBER

Vol. 198 No. 2

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COVER PICTURE

ST. JAMES
METHODIST CHURCH
Multi-Use Auditorium
Pasadena, California

Architect—George Montierth
General Contractor—Steed Bros.

A typical example of modern design for a multi-purpose Church facility . . . plain but sturdy with ample head space for general utility use.

For complete details of today's trend in architectural design of auditoriums, gymnasiums and multi-use rooms, see Page 10.

Photo Courtesy
Summerbell Roof Structures.

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. EDITORIAL NOTES .

NATIONAL HOME WEEK

The National Association of Home Builders, through president R. G. Hughes, has announced National Home Week will be celebrated from coast to coast September 19-26 inclusive.

Several thousand new homes replete with new ideas will be on display in all principal cities, and in many communities observation of Home Week will take the form of a "Parade of Homes" wherein an entire street of exhibit houses will be presented to the public.

Fundamental purpose of National Home Week is to illustrate the advantages of home ownership and to show the nation the latest ideas in home design, advancement in production and use of building materials, and newest methods of construction.

* * *

In building some $500 million of defense housing, the experts have produced so much that $47 million of it is now vacant.

* * *

PUBLIC RELATIONS

Many professional groups are devoting considerable time, effort and some expense to a consideration of "Public Relations."

Probably no two words in the English language are more thoroughly misunderstood and improperly used. They are bandied about loosely in conversation without the slightest knowledge of the basic fundamentals involved. "Public Relations" has become the hypnotic phrase designating a panacea for all individual and professional ills. The impression is quite general, and freqeuently even claims are made, that "Public Relations" will take care of all problems confronting an industry, or individuals.

Because the science of Public Relations is so little understood, it is easy for a good salesman to sell a "Public Relations" bill of goods, and by the same token those who "buy" such programs are unqualified to determine how much value is derived from the effort and expense. So! you pay your money and hope.

Most so-called "Public Relations" projects are nothing more or less than straight out-and-out Free Publicity efforts. "Free Publicity" is a little more easily understood as a concentrated project to get for free something that should normally be paid for.

* * *

Many fire protection principles that will reduce the probability of fire loss can be introduced to the construction industry on the drawing board.

* * *

HOME BUILDING INDUSTRY

President R. G. Hughes of the National Association of Home Builders, supported by a well known Building Committee, has conferred a "Charter Membership" in the Sidewalk Superintendent's Club, National Housing Center, Washington, D. C. to the editor of ARCHITECT & ENGINEER magazine.

The membership, according to Hughes, is "In recognition of outstanding interest in a vigorous homebuilding industry, of better housing for all the people, of continued advances in research, design and construction techniques and a belief that a home of your own is your best security," and the benefits are: "1) front row center standing room, 2) freedom to shout instructions and advice to the general contractor, subcontractors and workmen," now engaged in constructing the National Housing Center in Washington, D. C.

The Center, when completed, will represent an unique exhibit for the latest developments in home building and will include everchanging displays of the products and services of some 500 companies. The displays will range over the fields of design, construction techniques, materials and workmanship.

The exhibit area will occupy six stories of an eight story building; a comprehensive reference library; research institute, and national headquarters of the Association which represents some 30,000 members in 225 local associations throughout the nation.

* * *

Federal Aid is a system of making money, taken from the people in the form of TAXES, look like a gift when it is handed back.

* * *

AN ANTIDOTE FOR BUSINESS

With business conditions steadily improving and confidence in the future firm it may seem out of place to raise the question of reduced sales and increased selling effort.

Even in good times, however, some individual businesses find their markets falling away, and there is always the possibility of a general recession.

In these circumstances, Advertising expenditures and sales efforts should be critically analyzed and revised if necessary to assure a maximum in results. Remember there is always a new generation of buyers developing and there is a vital need of telling them about your products and services. Once the public is allowed to forget a product, years and untold expenditures may be needed to re-establish it.

World War II provided a perfect laboratory for the testing of arguments for and against advertising when normal buying habits are interrupted or abnormal.

The arguments IN FAVOR OF ADVERTISING won hands down.

IDEAL CEMENT COMPANY

salutes

the architects and engineers

Tomorrow's visions of architectural beauty and usefulness are the works of two groups of people who have much to do with the face that future America will wear. The construction sequence of "dream to drawing board to reality" would be impossible were it not for architects and engineers. Their specification of low annuol cost, long-lasting concrete for jobs of all types underscores the many construction advantoges of this all-purpose material.

To this group of intensely practical men with vision, Ideal Cement Company extends a hearty salute for the part they play in the future progress of America.

PORTLAND IDEAL CEMENT

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PACIFIC DIVISION

13 Plants Serving the Nation, Coast to Coast and Border to Border

NEWS and COMMENT ON ART

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, through the cooperation of the Wildenstein Galleries of New York City, is presenting an exhibition of seven French painters: Yves Brayer, Edmond Ceria, Jacques Despierre, Roger Chapelain-Midy, Bernard Lorjou, Andre Marchand, William van Hasselt.

French lithographs will be featured in the Little Gallery.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, has scheduled the following special exhibitions and events for August:

EXHIBITIONS — Chinese Gold and Silver — 600 B.C. to 1900, a presentation of the Collection of Dr. Carl Kempe of Stockholm; Artists of Ireland, a group of Paintings, Sculptures and Textiles; Contemporary Stoneware from Sweden; Paintings and Drawings by Hyman Bloom; Drawings and Watercolors by Flemish and Dutch Masters, from the De Grez Collection, of the Royal Museum of Fine Arts, Brussels; Paintings by Erle Loran; and Ars Medica, an outstanding group of medical prints by the Masters.

SPECIAL EVENTS—include Painting for Pleasure and Exercise in Perception, a course conducted by Charles Lindstrom which offers an opportunity to develop a more active enjoyment of art and all visual experience; Seminars in the History of Art, an informal discussion offered each Thursday morning; the Painting Workshop, painting from the model; and the Childrens classes each Saturday.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is offering a special exhibition of the Ancient Art of the Andes. This is an exhibition of more than 400 priceless objects from private and public collections in South America, Europe, Canada and the United States.

Young American Printmakers, an exhibit lent by the Museum of Modern Art of New York City; Paintings by Brian Connelly; Paintings and Drawings by young Italians, from the collection of Madame Helena Rubenstein; Early American Sculpture; The Horse in Painting and other permanent exhibitions.

Educational activities scheduled for August include Summer Painting Classes for children each Tuesday and Thursday morning, and an introductory class for adults desiring instruction in contemporary approaches to painting each Saturday afternoon.

The Achenbach Foundation for Graphic Arts (at the Museum) will feature Turn of the Century—Impressionism to Realism in American Prints; Prints and Watercolors by Reginald Marsh, on loan at the San Francisco Public Library; and Contest and Conquest, an exhibition of 60 prints related to sporting activities and games. Organ recital each Saturday and Sunday, and the Motion Picture series on Saturdays.

EIGHTH ANNUAL SAN FRANCISCO ART FESTIVAL

The 8th Annual San Francisco Art Festival will be presented during September. Art in every color, shape and form will highlight this giant annual outdoor exhibit sponsored by the San Francisco Art Commission and scheduled this year for Aquatic Park on September 22-26.

In keeping with the waterfront location, Director Felix Rosenthal and designer Michael Wornum plan a marine theme. Featured will be a wide mall stretching under hundreds of feet of decorative netting; colorful display stands and booths will be of simple, uniform design, and projected is an outdoor stage, set in an alcove against an impressive grove of trees.

This year's festival promises to be one of the most ambitious and unique exhibits in eight years of festival experience.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Walter Heil, has arranged a special summer-vacation group of exhibits for August, including:

Perceptions—An Exhibition of Photographs; the work of three Bay Area Artists—Ruth Armer, Richard Diebenkorn and Ralph Du Casse; George Grosz Retrospective; the 18th Annual Drawing and Print Exhibition of the San Francisco Art Association; Designer-Craftsmen—USA, 1953; Recent Paintings by Rufino Tamayo; Mexican Prints and Drawings by Orozco, Anguiano, Meza, and Soriano; and Contemporary Japanese Prints by Kiyoshi Saito, Umetaro Azechi, Fumio Kitaoka, and Shiko Munakata.

Special Events will include: Lecture Tours of current exhibitions each Sunday afternoon; Wednesday evening gallery tours; and in the Studio—Art for the layman and Adventures in Drawing and Painting, and the Children's Saturday morning Art Classes.

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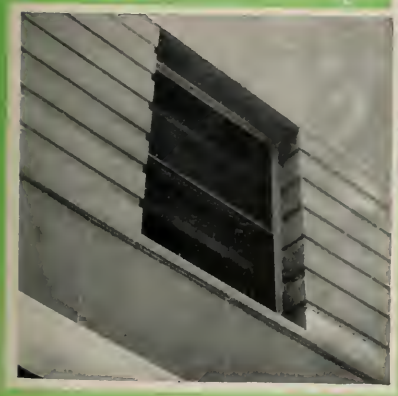

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MODERN LIGHTING for San Francisco Real Estate Office

LIGHTING FOR TODAY'S PROBLEMS

By M. J. MIERBACH, Illumination Engineer
Panama Lamp & Commercial Co.

DETAILS OF INSTALLATION in the Law Building, Las Angeles.

In this busy year of 1954, a year of adequate supplies and increased pressures for greater dollar values, the Architects, Engineers, and Lighting Industry are faced with the problem of greater selectivity to meet the requirements of their clients. This problem is emphasized in the field of lighting where developments have been exceedingly rapid in the past eight years and give promise of continued accelerated progress in the near future.

The client in particular has become more aware of his requirement for adequate levels of illumination, and as he sees the lighting installations of previous years approaching established Illuminating Engineering Society standards he is more than ever dependent

upon the Architect, the Electrical Engineer, and the Lighting Industry to assist him in avoiding the technical problems that have been forcibly brought to his attention by the obvious effects of heating, lamp blinking, light and color deviations, ballast hum, glare and excessive brightness, and costly maintenance through individual lamp, starter, or ballast replacement. Where a client's problem in the past has been chiefly inadequate lighting, today the problems include selection and control of the light source and the results.

One of the problems frequently encountered is lighting for merchandising. In this instance, the requirements call for the lighting to blend into the creation of an attractive atmosphere for working and for buying, to provide inviting visibility and color for the display of merchandise, and to provide for flexibility, control, and economy in the installation, operation, and maintenance of the lighting system.

The selected lighting solution shown is for the new Davis-Schonwasser store in San Mateo, California. The utilitarian modular pattern of lighting is well suited to the sale of merchandise displayed. The mixture of incandescent light with the shielded slimline fluorescent light provides excellent visibility, brightness, contrast, and color relationships. An approximate average of 40 ft. candles of comfortable light intensity is maintained on the counters. The display lighting ranges effectively from 60 to 150 ft. candles. The store's manager has received a great deal of favorable comment on the lighting from customers and employees since the opening of the store.

The overall design of the new store was by Irvine Goldstine, Architect. The lighting layout as prepared by the author was incorporated in order to meet the requirements of Davis-Schonwasser Co.

A second problem warranting serious consideration is one of general office lighting. The requirements call for the lighting to blend into the creation of an attractive atmosphere for working with emphasis placed upon provision for comfortable effective visibility for the various office tasks performed during the course of the day. Economy in the installation, operation, and maintenance of the lighting system are equally important requirements.

STORE LIGHTING . . . San Mateo, Calif.

The selected lighting solution shown is for the new offices of Buckbee-Thorne Real Estate Co. in San Francisco. The lighting system was planned and specified to provide a uniform light intensity of 40 ft. candles over the desk tops. Brightness is kept within a comfortable range by the "D" type plastic sides and Alba-lite glass bottom of the Supreme fixtures which enclose the slimline fluorescent lamps. Ease in maintenance is provided in the design of the fixtures by hinges which permit the glass bottom to swing open from either side for cleaning or lamp replacement. The planned results have been achieved to the great satisfaction of the office management and personnel.

Architects for the offices were the firm of Hurt, Trudell & Berger, and the Consulting Engineer was Dwight Coddington. Again, the lighting details were developed through cooperative planning by the author.

In view of the limitations of singular descriptions for the great number of variations possible in problems and in the solutions, two illustrations have been select-

(See Page 33)

IDEAL EXECUTIVE OFFICE LIGHTING

MONTANA STATE UNIVERSITY FIELD HOUSE at Missoula.

GYMNASIUMS - AUDITORIUMS

Cutting Cost Corners Doing A Better Job

By ARTHUR W. PRIAULX

Every aspect of community life in the western states has felt the impact of the unprecedented population increase of the past two decades. Fortunately, adequate financing has been available for new homes, commercial structures and industrial plants. Not so fortunate are school districts, city and county governments, with limited bonding capacity, and churches and similar organizations.

Incoming millions of new citizens have overburdened most existing facilities and have created a demand for new public buildings, auditoriums, gymnasiums and other community gathering places far exceeding available funds.

Into this breach in recent years have stepped hundreds of western architects and designers. They all started with the same problem, to design the maximum possible facilities for the least possible money. Their contribution to the orderly development of western communities within the rigid framework of economy limitations has been incalculable.

Probably in no single field of design have these western architects shown greater ingenuity, imagination and ability to utilize new ideas and new materials than in the development of low-cost gymnasiums, auditoriums, field houses and other similar structures. Actually, these new structures are more pleasing in

appearance and have more striking lines than the older, more cumbersome buildings which once served this purpose.

The answer is in the several new structural materials available to the architect today, which give him an opportunity for greater flexibility in design. The most widely adopted of these new materials is the oldest known building material used by man—wood—but shop-grown into wondrous new shapes and sizes.

Development of durable, non-corrosive glues by research laboratories has enabled man to utilize the nature-grown strength of wood's fibre and to extend this known structural value, by gluing average length dimension and boards together to form huge arches, trusses and timbers.

Western architects have pioneered the design and use of these new man-made arches and have come up with a spectacular architectural form.

Typical is the new field house at the Montana State University at Missoula designed by Fred A. Brinkman, AIA. Here is a structure 203 by 180 feet with beautiful sweeping roof lines and without a single post to mar the spectators' view. "In our experience," Brinkman stated, "we have found that glu-lam arches and beams are less expensive than other materials. The finished appearance is also an improvement, and we have found that acoustics within the buildings are definitely better. In the new Field House just completed for Montana State University, the fire insurance rate was less for glu-lam than for steel arches."

Ten parabolic arches 11x45½ inches section size with a 120 foot eight inch radius span the 203 foot area. The huge arches, the largest ever built, are on 20-foot center. The ridge is 73 feet above the floor line. The roof section is made up of nine bays with four by twelve inch sawn purlins, 36 lines to a bay. The field house seats 6,500 people with a standard basketball court in use.

At Compton, California, Paul R. Williams, AIA, was confronted with a problem of economy when he

COMPTON-IMPERIAL HOUSING PROJECT—Los Angeles. Side Wall and Roof Framing can be erected in a matter of hours by a small crew with engineered arches.

SUN VALLEY CAFETERIA

Not all glued structures have to be curved, the cambered and tapered heavy wood beams shown here help to create this large open area room.

BOEING CAFETERIA—Shows how architects can design shop-grown arches and trusses to span tremendous widths and at the same time achieve striking beouty.

W.C.T.U.
CHAPEL FOR
CHILDREN'S HOME
Corvallis, Oregon

Corner cutting on costs did not keep this architect from developing an auditorium of outstanding attractiveness.

RIVERTON (Washington) SCHOOL AUDITORIUM — Simplicity and low cost is the keynote of this budget limited school auditorium.

designed the Compton-Imperial Housing Project Auditorium. He says: "Wood laminated trusses were used on the project to meet the general design problem of clear span requirements as well as pleasing form. In addition, the wood trusses offered the necessary fire-rating and a more economical solution."

This is a beautiful auditorium made up of five V-type boomerang arches, which are 68 feet from floor to ridge. This building demonstrates one of the substantial economies effected when the glu-lam arches are used. The arches supply the frame for both the walls and the roof. Not only does this save the cost of heavier walls which would be needed to support a conventional roof, but it greatly reduces the over-all weight of the building. Labor economies are another item in cutting cost corners. A few men can erect these arches in a matter of hours, thus providing the complete skeleton of the building ready for carpenters to install roof and siding.

The lovely cafeteria at Boeing Aircraft plant at

PALO ALTO CITY HALL—Council room. Small buildings appear larger with ceilings high and floor area past free.

FIRST BAPTIST CHURCH (Van Nuys, California) AUDITORIUM — These V-type arches with built-up heels permit the design of simple, yet distinctive roof structures with pleasing lines.

Seattle gives an idea of the decorative value of these man-made wooden arches. The graceful lines of these arches as they sweep majestically from floor to roof is inspiring. The ten curving, boomerang style wooden members provide 90 feet of clear floor area. They have been sanded and finished in natural color to retain the beauty of the Douglas fir texture and grain.

Another example of the many possibilities in design in low-cost auditoriums is the Glendale, California, Sinai Community Center auditorium, created by architect George Postle. Arches reach up from the four corners joining at the top center of the circular roof to provide 77 feet of floor space without a post. To supply a complete frame for the roof, George Postle uses two shorter curved arches 18 feet long tied into each of the four corner arches and supported by the walls This is a sturdy, well-conceived building with graceful, dainty lines.

Not only are these new-type buildings pleasing, but they can be adapted easily to almost any desired decor. In The Ram dining room at Sun Valley, the slim tapered and cambered beams have been stained and left exposed to provide a rustic atmosphere for this Old English setting.

Simplicity is the keynote of many of these new school auditoriums where costly frills and decorative schemes have given way to necessary economy. The Riverton, Washington school auditorium, designed by Ralph H. Burkhard, AIA, is an example of the real bargains school districts are getting for their money today. Here is a completely adequate building, where economy has been combined with good sense and the result is a serviceable and attractive public gathering place.

Donald Edmundson, AIA, was also confronted with a problem of basic economics when he designed the auditorium-chapel for the W.C.T.U. Children's Farm Home at Corvallis, Oregon. His ingenuity and long experience were drawn on to good advantage and his use of simple, exposed parabolic arches give simple dignity and charm to this building.

Another excellent example of the beauty of simplicity is the First Baptist Church auditorium—Unit A —Van Nuys, California, designed by Architect H.

KERN PARK CHRISTIAN CHURCH (Portland)—More ornate is this Church ouditorium with a more decorative ceiling to fit the traditional Tudor styling.

Van Buren. Here, clean-lined V-type arches were utilized to give 69 feet of full-ceiling with no obstructing posts. Here is a large adequate room and the absence of costly decorative work enhances rather than detracts.

More elaborate, but still well within budget limitations is another Donald Edmundson, AIA, creation, the Kern Park Christian Church auditorium in Portland. The traditional form of the church interior has been followed more closely here, with exposed arches and wooden purlins forming a more complex styling.

Architect Leslie I. Nichols, in designing the Palo Alto, California, city hall, demonstrates savings that can be effected in smaller public structures. Curved, glu-laminated wooden beams have been used to good advantage in the council chambers where taxpayers may see their council in action without the inconvenience of obstructing posts.

BROAD MEADOW SCHOOL (Needham, Mass.) — Sweeping curves of these Tudor arches are pleasing contrast to straight lines of rest of school.

VETERANS MEMORIAL (Orosi California)—Wooden arches and purlins blend in this hall in typical wide-span design.

A rather unique multi-use school auditorium was designed by architect Robert S. Raymond for the Santa Paula, California schools. In this unusual conception he has achieved an interesting room with a 40-foot clear span by using curved laminated beams. This gives a fine open curved ceiling without tie rods or heavy tie beams to interfere with the full use of the room height, he points out. Architect Raymond has been experimenting for several years with a variety of roof support structures and believes he has finally achieved in this particular style of laminated beam a device which permits him to develop a simple framing method for schools, auditoriums and similar structures.

Still another budget-limited, multi-use room was designed by architect George Montierth for the St. James Methodist Church of Pasadena. This room is used for basketball and other athletic contests as well as a variety of social functions. Four laminated arches provide the frame for both roof and walls and allow unencumbered head space the full length of the room. The effect of the exposed beams implies strength, and the lines are clean and pleasing.

"We have used laminated wood to a considerable extent in the past few years," reports architect James M. Hunter, AIA, of Boulder, Colorado, "in an effort to reduce building costs—both in church construction, in schools and in other public work. The laminated wood arches for the Boulder Junior high school span some 92 feet in one continuous arch, and span the length of the gymnasium. They give us an economical type construction and permit additions to the gymnasium without encountering gears and buttresses which would occur were the gymnasium spanned the short way. This flexibility at no added cost is a very real saving when the gymnasium is added to."

The Orosi Veterans Memorial Building, at Orosi, California, is one of a number of outstanding public buildings designed by architect William Hastrup in recent years which combines all the required functional aspects demanded by his clients within limited budgets without sacrifice of the aesthetic qualities. Architect Hastrup has exploited the shop-grown arch for many purposes and his buildings reflect the wide

(See Page 35)

SCHOOL LIBRARY — Showing another example of unique possibilities where the curved arch provides the framework for a wide-span, low-ceiling room of imposing appearance.

NORTHGATE—SEATTLE, Wash. . . . PARKING AT NIGHT (Capacity 5,000 Cars)

What Makes A Shopping Center Successful

Part II

By FRANK EMERY COX*

Sales Research and Business Development Analyst

The NORTHGATE center is open two nights each week. Big percentage of volume comes from night shopping. Volume high because of increasing popularity of "family" visits. Unit sales are higher, less returns of merchandise take place, and better quality buying results. Slower tempo of store movement and more care in selecting occurs.

*NOTE: This is the second and concluding article on the subject of SHOPPING CENTERS, prepared especially for ARCHITECT & ENGINEER by Mr. Cox, Manager of Sales Development for the Kawneer Company, Berkeley, California. Included in the articles were consideration of 1) Planning for Shopper Circulation, 2) Ownership, 3) Types of Centers, 4) Ingredients for Success, 5) Methods of Computing Parking, 6) Shopping Habits, 7) Retail Patterns, 8) Layouts of Parking, and 9) Determining Buying Power and Designs for Selling.

PARKING

Convenience and adequacy of parking are essential for the success of any shopping center. Generally, developers of planned projects have agreed that the mount of sales volume is in direct ratio to number of parking stalls available within 250 feet of where shoppers desire to make their first stop.

In planning parking, future requirements must be considered. It is estimated that automobile registra-

NOTE: Stalls provided in project illustrated at right, food stores in foreground, department store to right through arcade, halfway down line of stores. Pick-up of packages from super market at one of two entrances can be observed in line of cars at curb waiting for delivery of packages. Average wait, less than 30 seconds.

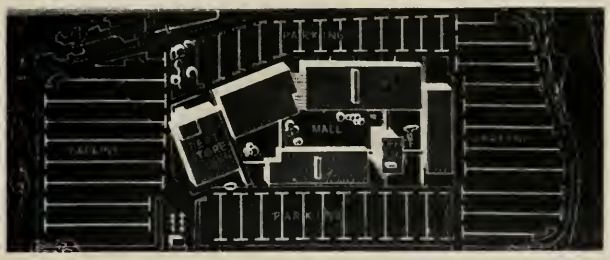
tions may increase as much as 90% in the next twenty years, indicating more use of autos and increasing the need for more parking.

Another factor in planning for the future is anticipated growth in population. All points considered, it is estimated that need for parking twenty years hence will be 50% greater than today.

Greater space is needed for parking adjacent to food and department stores than for specialty and service shops.

PARKING LOT LAYOUT IS IMPORTANT

Arrangement of parking areas around a center can have a major influence on its success. This calls for a different approach from the ones used in the past.



a. It is generally conceded that bays should run at 90 degree angles to principal pattern of building plan (note drawing).
b. Maximum of 14 cars per side of bay considered most practical.

ILLUSTRATION at left shows handicap through lack of walkways. Absence of car stops causes uneven parking and lost space. Two-way traffic creates hazards and congestion. Note: parking lot (rear) entrances from vehicle area.

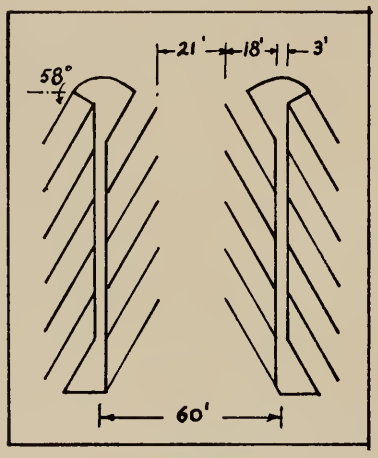
c. Width of stalls seems best to have minimum of 8′6″ clearance.

DIAGRAMS OF TWO TYPES OF LAYOUTS

Width of stalls—8′6″

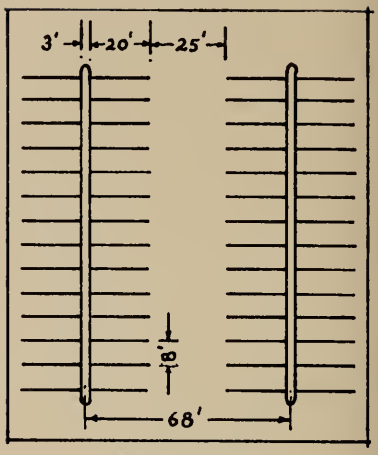
No. cars per 100 ft. curb—8

Diagram I



60 degree parking

Diagram II



90 degree parking

Curb occupied per car—12′1″

No. cars per acre excluding entry ways and walk ways—120

Width of stalls—8′6″

No. cars per 100 ft. curb—11

Curb occupied per car—8′6″

No. cars per acre excluding entry ways and walk ways—158

BELOW—Rear entrance from parking lot with display areas adjacent. Lack of walk ways is noticeable. Small "scooter-bus" transports shoppers from more remote parking areas, encouraging greater purchaser circulation.

WALK WAYS

Protection from traffic is provided pedestrians by lanes. These can be with raised walks with curbs used as car stops, or at lot level with wood or concrete stops to prevent bumper overhang into the walk way area.

Generally, three feet walk clearance is considered most economical and practical.

The trend is rapidly growing for protection to shoppers against sun, rain and snow through provision of walk-way roofs. Many products are available for treatment of this problem. Newest material is aluminum in pre-fabricated sections of light weight (1½ lbs. per sq. ft.). Some center operators predict that centers without roofed walk ways will be outmoded in next few years.

COMPUTING VALUES OF PARKING STALLS

Modern merchandise authorities place definite monetary values on parking stalls ranging from $7,000 to $40,000 per space in annual retail sales volume, depending upon type of store, kind of merchandise, percent of mark-up, and many other factors.

There are two practical methods currently used in computing adequate parking space for a center:

1. Unit Sales Per Stall Formula

Hypothetical Case

A—average unit sale (in dollars)	$5.10
C—customers per car	1.5
M—minimum daily car turnover per space	3.1
P—percent of customers arriving by car	60%
N—number of shopping days in year	300

A (5.10) × C (1.5) × M (3.1) = $23.72, which is the hypothetical value per day of each stall.

N (300) × $23.72 = $7,116.00, which is the value of one parking stall per annum in retail volume.

If 60% of customers are car borne, the sales volume from this segment of trade per annum would be $7,116.00 multiplied by the number of stalls. With the other 40% of shoppers arriving by other means, 100% would be $11,860.00 total trade.

To determine the number of stalls needed, the total sales volume expected, based upon economic studies, must be computed by another formula. Assume the center is expected to produce $30,000,000.00 in sales. To decide on the number of stalls needed, it would simply be $30,000,000.00 × 60% = $18,000,000 ÷ $7,116.00 = 2,530 stalls.

Space around the parking lot should be apportioned according to requirements of various businesses. For example, a super market would probably need four times the parking area of a credit jewelry store.

2. The Square Footage Ratio Plan.

Many developers use a simple formula of ratio of parking space to gross building area. Generally, when this plan is used, the ratios run from 3 sq. ft. of parking area to 1 sq. ft. of building space, to as high as 5 to 1.

The Tenants Association of a large Center sponsors a weekly folk-dance on one of the nights when the stores of the center are open for business.

Television Show is sponsored entirely by Center monagement.

SANTA CLAUS model 20 feet toll and operoted by 2 men is another speciol Center ottraction sponsored by o Tenants Asso-ication eoch yeor.

PARKING SUMMARY

Whichever method is used, the plan should be expandable for many years ahead, rather than for today only. Anticipated changes in the inter-relationship of business should be considered. Techniques for development of properly allocated parking areas come from experience, but can be improved immeasurably by observation of successes and failures of centers already operating.

MAINTENANCE OF PARKING LOTS

Operators of centers have a wide variety of methods for upkeep of parking lots, landscaping, walk ways, and other areas of the grounds.

Perhaps the most general rule is an arbitrary assessment of ¼ of 1% of gross sales against each tenant to be used for upkeep of these facilities. One outstanding successful center assesses 1-1/3c per square foot of occupied ground floor building space for this purpose.

CHRISTMAS SEASON

Each year a massive Christmas tree is erected, profusely decorated and specially lighted by the management of this Center.

PROMOTIONAL EVENTS

Most successful centers have an Association of Tenants for the purpose of developing advertising, promotional and publicity activities. There seems to be no set pattern as to center management participation, but generally the supervision, stimulus and control are kept under the direction of the landlord and he participates financially. Some of these promotional ideas are shown in this article.

SALES PER SQUARE FOOT SPACE PLANNING

In planning the square footage for different types of stores in different categories of centers, it is considered reliable to estimate the amount of footage on a "sales per square foot basis." For instance, in contemplation of a district shopping center, one planner arrived at his conclusions as to square footage and total gross volume together with estimated income expectancy as follows: (see chart on page 32)

The purpose of the planner in this instance was to prepare a preliminary estimate for the proposed owner to give some idea of "return on income" possibilities. In estimating his yearly sales on a square foot basis he was appraising the prospective tenants in such a way,

(See Page 32)

GIRL CAROLERS from a neighboring church are sponsored by management.

Combination wall barbecue

Western Trends in Custom Barbecue Design

By ROBERT CARROLL*

Barbecues are not new to the West. For many years large brick structures standing isolated as Druid monuments in backyards have been a familiar sight. It has not been unusual to find minute capacity barbecues housed in towering brick structures that actually used up to five or six thousand bricks. Within the last two years a wave of so-called barbecue appliances have been placed on the market with the rather elementary principle that putting charcoal and meat together automatically produces barbecued delicacies.

PROBLEM

To create barbecues functionally adapted to the Western climate, designed within the limitations of good taste, using the most recent scientific advances in cookery methods.

THREE BARBECUE TYPES

Basic outdoor unit, adjustable grill and electric spit, storage unit below (left).

Chain belt type with seven automatic skewers (center), large warming oven or storage unit.

Copper hood captures smoke of indoor type at right; refrigerator stock model.

SOLUTION

These compactly designed unitized barbecue installations may be grouped in scores of combinations.

Original brazier design by Franciscan Forge — 3' dia.

They may be fairly elaborate with warming ovens and storage units conveniently accessible in the same working wall as the barbecue rotisserie. The units may be assembled for indoor family room or country kitchen installation, or assembled in outside garage or car-port walls, for free-standing patio walls. They will accomodate small family barbecues or large group cooking occasions with economy in other instances. They can incorporate the newly advanced and substantiated theory of vertical bank cookery with charcoal placed vertically behind rather than beneath certain meats and fowl.

TV-Barbecue and rotisserie. Triple spit and additional for skewered meats.

WORK

On the designer's drawing board are such future refinements as heat treated glass door for full visibility during all cooking, hydraulic push button grill adjustment, and infra-red barbecuing.

*Robert Carroll is one of the San Francisco Bay Area's well known artist-designers specializing in custom ironwork. He is also owner of the Franciscan Forge of Atherton, California.

WILL INSURANCE COVER YOUR LOSS?

Of all the coverage afforded under the Comprehensive Liability policy the automobile protection probably has the fewest loopholes. It insures practically every liability which can arise out of the ownership, maintenance or use of any automobile, whether owned by the insured or not.

About the only exclusions apply to damage to property being transported in the vehicle which, of course, is a separate form of insurance in itself, and the usual exclusion of injury to employees entitled to Workmen's Compensation benefits.

HENRY J. TRAINOR
Consultant, Miller & Ames, Insurance Brokers

It is necessary that all of the automobiles owned by the insured be scheduled as of inception of the policy but, thereafter, coverage is fully automatic on any newly acquired automobiles and the final premium is determined by an audit at the end of the policy period. If the insured hires automobiles, there is insurance afforded under his policy, regardless of whether or not the person owning the automobile carries any in his own name. Of course, this protection would extend only to the named insured and not to the owner of the uninsured vehicle.

A common source of claims arises from the use of automobiles by employees in the course of the employer's business. Because of the employer's responsibility for the accident of his employee, you usually find him responsible for any damages caused by the employee in company business. This liability is insured under what is commonly known as "non-owned automobile insurance" and is part and parcel of the coverage under the Comprehensive Liability policy.

Generally speaking, whatever insurance is carried on the automobile will be available to anyone driving or using the car with the permission of the named insured. Thus, for example, if an employee is involved in an accident while driving his car in company business, the employer would be protected by whatever insurance the employee carries. If this were insufficient, then the coverage under his Comprehensive Liability policy would come into play.

By the same token, if an employee is using a company owned automobile for private business or pleasure with the consent of the employer, then the employee receives the full benefit of the employer's insurance policy.

While on the subject of automobile insurance, a little discussion on the matter of completing claims reports would be in order.

It is important that the accident be reported in as much detail as possible and promptly. Names and addresses are very important, whether they are witnesses or persons directly involved in the accident. The claims department of an insurance company does not investigate every single claim reported to them. If property damage only is involved and the report clearly indicates that one party or the other was responsible for the accident, unless the amount of loss is substantial, the claim would probably not be investigated. If bodily injuries are involved even though they might be slight, then much attention is given to the claim and a thorough investigation is made. Therefore, the report should give the insurance company an idea as to the severity of the accident. We can recall one case where the report indicated merely that the insured had struck the car in front of him but it actually turned out that it started a chain reaction with several other cars involved in it and two or three people received serious injuries. What looked like a simple property damage claim turned out to be a $25,000 loss. Fortunately, this accident received publicity in the newspapers; otherwise, the matter might have gone unnoticed in the company files until suits were filed against the insured.

Prompt attention in reporting claims will frequently enable the company to expedite settlement and favorable settlements result in better experience and lower rates.

EDITOR'S NOTE: The insurance brokerage firm of Miller & Ames, San Francisco, has for many years specialized in administration of insurance programs for all phases of the construction industry, and further explanation of any points raised in this series of articles will be gladly furnished upon request.

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SAN DIEGO CHAPTER

Personal experiences and impressions gained during a recent trip "behind the Iron Curtain" were related by Mrs. Lydia Landon Grandier, publisher of the San Diego Daily Transcript, at the August meeting.

Mrs. Grandier returned to San Diego following a tour of Europe and the near East.

Prior to the dinner meeting members were conducted on a tour through the Old Whaley House by Ray Anderson's historic buildings committee.

EAST BAY CHAPTER

The August meeting was a joint meeting with the Coast Valley's Chapter and a tour of the Owens-Corning Fiberglas Corporation plant in Santa Clara. The plant was in full production at the time of the tour and members had an excellent opportunity to view the production of the firm's product from the raw to the finished stage.

Following inspection of the manufacturing plant, members enjoyed a good dinner.

CALIFORNIA COUNCIL OF ARCHITECTS

Advance reservations indicate the 1954 Annual Convention, scheduled for September 30-October 1-2 at Hoberg's in Lake county, will be one of the best attended gatherings of architects and allied interests to be held in California. Ted Moulton, reservations chairman, pointed out that facilities for the gathering were "expandable" and if Hoberg's Resort itself is filled, delegates can be accomodated in adjoining resorts.

Architect F. Bourn Hayne, Convention Chairman, reports all committees making elaborate plans and Vincent G. Raney, Program Committee Chairman, indicates the program scheduled represents a discussion

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Producers' Council—Northern California Chapter (see Special Page)

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of technical and professional subjects that assure attendance at the convention worth while.

A convention preliminary includes a trip from San Francisco to Napa by boat, and thence to Hoberg's by bus via the colorful Napa valley.

WOMEN'S ARCHITECTURAL LEAGUE—SAN DIEGO

The Women's Architectural League of San Diego conducted a highly successful event in the "Tea" served in conjunction with the recent "Schindler Exhibit."

OREGON CHAPTER

Selection of a name for the Chapter Bulletin will be announced at the September meeting. A number of excellent suggestions have been offered and the Committee in charge of making a selection has had a difficult time to decide.

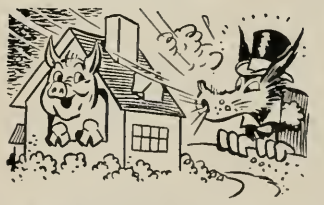
PASADENA CHAPTER

Gordon Whitnall, Planning and City Government Consultant, was the principal speaker at the August meeting, discussing "how the architect works with the city planner," and offering many suggestions from his personal experiences in the field.

NEW MEMBERS: MacAlfred Cason and William L. Rudolph, Corporate; and Marjorie M. Jump, Robert G. Pratt, Jr., and Waldo Whitaker Shannon, Associates.

ARCHITECT EXPANDS OFFICE

Ward Thomas, Architect, recently announced the association of M. H. L. Sanders, Jr. with his office and the removal of offices to expanded facilities at 133 Kearny street in San Francisco.



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STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

Don V. Roberts, Staff Engineer for Dames & Moore, Foundation Engineers, and Marvin Larson, Structural Designer for Hall, Pregnoff & Matheu, spoke at the August meeting on two important phases of engineering.

Roberts took as a subject "Structural Behavior of Buildings Founded on Bay Mud," and described the behavior of various types of foundations for buildings constructed on reclaimed tide lands, and since tide lands represent a major portion of the land remaining for industrial use in the San Francisco Bay Area, the problems associated with construction on "bay mud" are vital to the engineer. Roberts discussed the physical properties of bay mud and its behavior under the loads applied by fills and structures; comparison of observed and predicted settlements for a series of projects constructed during the past ten years; and behavior of pile supported structures with special emphasis on deflections of tie rods and "floating floors" where only the structural frame is pile supported.

Larson discussed in his subject "Upper Chord Stresses in a Bow String Truss," the analysis of stresses in the upper chord of a bow string truss and demonstrated that consideration is required of several factors not present in other types of structures.

Reports of the Annual Picnic indicated it was one of the best outings observed by the Association.

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STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The August meeting was a "field day" in the strictest sense of the word. It was the annual picnic and outing and was held at the Oakmont Country Club in Glendale, with attendance shattering all previous records.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

Richard W. Young, Attorney and former member of the Interstate Commerce Commission, was the principal speaker at the August meeting held in the Presidio Officers Club, Presidio of San Francisco.

Young spoke on the subject "The 5th Amendment," and this "hot" subject of a means of evading the law was thoroughly discussed. The speaker, as a member of the Commission, has covered the Truman, McCarran, Velde and McCarthy hearings and testimony offered at those investigations. Young, a resident of Berkeley, is president of the Berkeley Library Board and former member of the Berkeley Board of Education.

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

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American Society Testing Materials
Northern California District
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Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

J. G. (Buzz) Wright, Structural Engineer, was appointed 2nd vice-president, succeeding Captain H. H. Bagley, USN, who has been transferred, according to an announcement by Paul D. Berrigan, Post president.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Plans are crystallizing for the Annual Structural Engineers Association Convention, scheduled for Hotel del Coronado, Coronado, October 14-16.

Technical subjects which will come up for discussion include "Limit Design," a talk by Lynn S. Beedle, Assistant Director of the Fritz Engineering Laboratory of Lehigh University; "Deep Foundations," a symposium in which Capt. Kenneth Godwin, Public Works Officer, 11th Naval District, will act as moderator and members of a special panel for discussion include William J. Bobisch, Director of Design, District Public Works Office, 11th Naval District, San Diego; William W. Moore, partner of Dames & Moore, Foundation Engineers, San Francisco; L. T. Evans, Consulting Foundation Engineer, Los Angeles.

"Prestressed Concrete" will be discussed by Robert Dorland, former head of the Department of Building and Safety of San Diego, and consultant to a newly formed prestressed concrete firm; "Current Business Trend" is the subject of a talk by B. E. Etcheverry, Director of Cost and Commercial Planning, Kaiser Steel Corpn., and a number of other equally important subjects will be on the program.

Entertainment and special trips offer a variety to make this year's convention a "must."

ENGINEERING OFFICE EXPANDS

Dames & Moore, Soil Mechanics Engineers, with offices in San Francisco and Los Angeles, have opened an office in Chicago with Benjamin S. Persons appointed Assistant to the Resident Partner in Chicago. Other firm changes include the resignation of William W. Brewer, resident partner in the San Francisco office, and the announcement that William W. Moore, Senior Partner, will continue to direct activities of the San Francisco office.

COMMITTEE ON HIGHWAY DEVELOPMENT NAMED

Appointment of a 16-member Subcommittee of Highway Development of the Chamber of Commerce of the United States, as announced by Clem D. Johnson, Chamber president, includes the names of a number of outstanding leaders of the West.

Named to serve on the nation-wide board is Pyke Johnson, past president of the Automotive Safety Foundation, chairman, and among others is Frank E. McCaslin, President, Oregon Portland Cement Company, Portland; Clinton S. Reynolds, Tacoma Transit Company, Tacoma, Washington; and Calvin K. Snyder, Manager of the Denver (Colorado) Chamber of Commerce.

ENGINEER OPENS OFFICES—Thomas F. Fitz Gerald, Structural Engineer, has opened offices at 320 Clay street, San Francisco.

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PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Carl B. Frank	Vice-President, John C. Cowley	Secretary, John J. O'Connor	Treasurer, Phillip F. Brown, Jr.
Detroit Steel Products 921 Larkin Street	**The Brookman Co., Inc.** 2833 Third Street	**H. H. Robertson Company** 306 Sharon Bldg.	**Otis Elevator Company** No. 1 Beach Street

Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

Members of the Committee who will coordinate the Producers Council activities in connection with the Annual California Council of Architects Convention at Hobergs Resort in Lake County.

COORDINATING COMMITTEE — Producers Council with A.I.A. Convention Committee: Stanley L. Basterash (left), Western Asbestos Co.; Phil F. Brown, Jr., Otis Elevator Co.; Howard W. Noleen, The E. F. Hauserman Co.; George E. Conley, Johns-Manville Sales Co.; Andre R. Raegiers, Arcadia Metal Products; and John C. Cowley, The Brookman Co., Inc., General Chairman of the Committee.

The following is a list of members appointed to head up the various sports activities, the Chairman is Mr. P. F. Brown, Jr. of Otis Elevator Company.

Golf:	Pete C. Christensen	Truscon Steel Company
Horse Shoe:	Stan L. Basterash	Western Asbestos Company
Ping Pong:	Andre R. Roegiers	Arcadia Metal Products
Tennis:	Phil D. Mittell	Otis Elevator Company
Baseball:	(Bernard J. Sabaroff	Architect
	(John C. Cowley	The Brookman Company, Inc.
Croquet:	Boris Kitchin	Rolph, Mills & Company

Prizes will be given for all sports events.

The Committee on Entertainment comprises the following persons.

Whit K. Alger	George L. Hall & Associates, Inc.
Howard W. Noleen	The E. F. Hauserman Company
George E. Conley	Johns-Manville Sales Corp.
William Corlett	Architect
J. Lloyd	Architect
Stan L. Basterash	Western Asbestos Company

***Meetings Note:**

The September Informational Meeting of the Producers Council will be held in Oakland on September 8, 1954 at the Athens Club. Mr. Lloyd O. Johnson, Northern Division Sales Manager of Arcadia Metal Products will be guest speaker and will have a film showing the different applications of sliding doors.

***As usual the Producers Council will have some unusual entertainment.**

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

SAN FRANCISCO
WATERFRONT

Two additions to the San Francisco waterfront are being planned by the California State Board of Harbor Commissioners.

Piers 15 and 17 will be remodeled at a cost of $2,160,000; and a parking area to serve 650 automobiles will be built at a cost of $1,220,000.

ALASKA ARMY
CONSTRUCTION

Contracts totaling more than $2,000,000 for defense construction in Alaska during July were awarded by the Alaska District Corps of Engineers.

Nine different contracts were awarded and will all get under way in August.

HEALTH CENTER
SACRAMENTO

The Board of Supervisors of Sacramento county have authorized the architectural firm of Franceschi & Mullen of Sacramento to start preliminary drawings for the construction of a new Health Center building to be built in conjunction with the County Hospital.

The building will be 1-story, concrete construction with metal partition, acoustical ceilings and asphalt tile floors. Estimated cost is $400,000.

EPISCOPAL CHURCH
FOR LAS VEGAS

The Christ Church Episcopal of Las Vegas, Nevada, will construct a new church plant in Las Vegas, according to a recent announcement.

The church building will seat 320 persons and will contain a chapel, Sunday School rooms, and utility quarters. Construction will be of reinforced concrete block, mission tile roofing, slab and asphalt tile floors, steel sash, and wood roof trusses.

Plans are being prepared by architects Zick & Sharp of Las Vegas.

ADMINISTRATION
CENTER

The Los Angeles County board of supervisors have commissioned the architectural firm of Raphael Nicolais & Associates of Los Angeles to prepare plans for the construction of an Administration Center in El Monte.

The project will comprise a 2-story County Court building and a 1-story County Health building, with a total area of 38,300 sq. ft. The building will be of reinforced brick and concrete, composition roofing, concrete slab, ceramic tile, carpet, terrazzo and composition flooring.

Estimated cost of the project is $668,734.

NEWSPAPER
ADDITION

The San Rafael Daily Independent-Journal are planning construction of an addition to their pressroom.

Plans are being prepared by the architectural firm of Gromme, Mulvin & Priestly of San Rafael.

COLONIAL HEIGHTS
ELEMENTARY SCHOOL

Architects Corrough & Wong of Stockton have completed working drawings for the construction of a frame and stucco Colonial Heights Elementary School building for the Lincoln Elementary School District near Stockton.

Estimated cost is $350,000. Building will include 12 classrooms, 2 kindergartens, kitchen, multi-purpose and toilet rooms.

OFFICE BUILDING
FOR EUREKA

The Humboldt Land Title Company of Eureka will build a new combination 1 and 2-story office building in Eureka. Construction will be of concrete block, structural steel and frame, and a large concrete vault.

Estimated cost of $75,000.

Hudson & Van Fleet of Eureka are the architects.

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Type	Sq. Ft. of Store	Yearly Sales Expectancy Per sq. Ft.	Total Gross Volume	Estimated Yearly Income	Percent of Sales For Rent
Food Market	26,000	$60	$1,560,000	$19,500 @	1¼
Variety	3,000	40	120,000	6,000 @	5
Men's Wear	2,000	35	70,000	4,200 @	6
Jewelry	2,000	40	80,000	5,600 @	7
Women's Wear	2,400	33	79,200	4,752 @	6
Drugs	4,000	45	180,000	9,000 @	5
Hardware	4,000	40	160,000	8,000 @	5
Restaurant	3,000	40	120,000	7,200 @	6
Ice Cream, Candy, etc.	1,000	45	45,000	3,150 @	7
Bakery	500	45	22,500	1,125 @	5
Fish Market	500	60	30,000	1,200 @	4
Delicatessen	500	50	25,000	1,000 @	4
Liquor	500	50	25,000	1,250 @	5
TOTALS	49,400		$2,516,700	$71,977	

Note: The above sales volume figures and estimates of yearly income expectancy were considered on a **minimum** basis to insure the proper safety factor.

so that if their sales could not be expected to be above the minimum amounts indicated, then such tenants would be of a marginal class of operators and of very doubtful desirability.

SURVEYS ARE NECESSARY FOR A SUCCESSFUL SHOPPING CENTER

A number of questions must be adequately analysed in order to be able to determine whether or not a shopping center can be a success. Some of these questions can be defined as follows:

1. trading area and driving time
2. number of families and income
3. population nationalities
4. competition
5. stability make-up of community
6. topography and physical barriers
7. foot and mass transportation
8. percentage of gross potential which can be captured.

DETERMINING POTENTIAL RETAIL SALES VOLUME

Driving time rather than distance from center usually determines potential customers. The following formula can develop volume figures which in turn can be transformed into store footage and parking area figures after careful economic studies are made.

$$TF \times EI = VRB$$

TF—Number Tributary Families in primary trading area.

× (times)

EI—Normal Expendable Income these families. (Expendable income: that portion of gross income used for purchase of retail merchandise and service.)

(Equals)

VRB—Gross Volume of Retail Business that should be done by stores in the area. Arbitrary percentages of this gross business must then be determined by careful analysis.

Tables have been developed which indicate sales expectancy per square foot in different lines of business, varying from $25.00 per square foot to as high as $200.00. All estimates figured on minimum basis. By determining amount of sales expectancy per square foot, it is then possible to divide this figure into anticipated volume in each line which center should merit and obtain the answer to the square footage necessary to do an efficient business in that type of store. During this process, the interrelationship of various businesses can be determined.

Example: Family income $5,000 annually. Expendable portion probably around $3,000. Of this, $975 would be spent for food (U. S. Bureau of Labor Statistics). Estimates should require minimum of one square foot of store area to sell $100 of merchandise in super-market. By quick mathematical calculation, floor area for entire center can be roughly determined.

CHANGED SHOPPING HABITS REQUIRE MODERN PLANNING FOR SALES

Many alterations in buying habits have developed in the last few years which must be taken into consideration.

1. Currently the modern shopper will visit a food market about 200 times a year, a variety store 66 times, a department store 33 times, a candy shop 28 times, and other stores in proportion.

2. Increase in buying power. National population grew approximately 20,000,000 from 1940 to 1950. Wage earners increased proportionately—14,000,000 more in the decade. Average wages of industrial workers increased from $25.20 per week to $60 from 1940 to 1950. Middle income group in the decade increased from 48% to 66% of total.

3. Shoppers more sensitive to buying environmental

influences such as color harmony; air conditioning; acoustical conditions; slower tempo of movement to shop; greater appreciation of display; sensitivity to lighting, sun control, glare and other visual factors; floor coverings; proper signing; and many others.

4. Great percentage of family shopping, encouraging "one stop" centers.

5. Increase in night shopping. One center reporting as much as 40% of total volume sold at night (open two nights per week). Night shopping imposes new problems, such as:

(a) Efficient night lighting
(b) Display for night purposes
(c) Traffic control under night conditions
(d) Policing and supervision of night parking
(e) Controlling traffic movement through stores by lighting and patterns
(f) Different types of signs for night use.

6. Shift of population toward suburban areas.

7. Increased use of automobiles for transportation.

SUMMARY

Establishment of periphery shopping centers seems to have reached stable proportions. Mortgage money for sound projects is available. Saturation points may be reached in some areas unless care is exercised.

Generally speaking, centers with contemporary design seem more successful from a volume and stable investment standpoint than those considered unique, rustic, or unusual. As one operator of a large center put it, "People are attracted for large scale buying to an atmosphere suggestive of that to which they have been accustomed but which has been dressed up in modern clothes."

It seems certain that the future of scientifically designed shopping centers lies in the thorough understanding of the needs for adequate parking, proper relationship of businesses, careful selection of tenants, adherence to conventional rather than radical design, and the use of various formulas that will determine the spending power of adjacent populations and the sales efficiency of the planned Machine For Selling.

LIGHTING FOR TODAY

(From Page 9)

ed to bring into better perspective the possibilities of solving some of today's lighting problems by means of luminous ceiling lighting systems.

A principal requirement in the foyer of the Law Building in Los Angeles was for modernization in an existing building in order to provide an attractive, well lighted entry. It was determined that the translucent plastic luve-tile shown would meet the requirements of the building and would in itself conceal the old ceiling and become a part of the luminous system. The photo taken while the installation was under way

(See Next Page)

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PERSONALITIES

JOSEPH DANIELS

Engineer

Seattle, Washington

Joseph Daniels, Professor of Mining Engineering and Metallurgy at the University of Washington, retired at the end of the Spring term after teaching at Lehigh University and the University of Washington since 1907.

JOSEPH DANIELS
Professor-Engineer

Professor Daniels received his bachelor of science degree from Massachusetts Institute of Technology in 1905, master of science degree from Lehigh University in 1908. He was an instructor and associate professor in mining engineering at Lehigh University from 1907 to 1911 where he was acting head of the Department of Mining Engineering for the final year. He has been professor of mining engineering and metallurgy at the University of Washington since 1911. In 1913, Professor Daniels received the degree of Engineer of Mines from Lehigh University.

After receiving his bachelor of science degree, Professor Daniels was an engineer with Dominion Coal Company, Glace Bay, Nova Scotia, before embarking on his long career in education. From 1911 to 1918 he was a member of the Washington State Geological Survey engaged in studies of mineral resources in the State of Washington. From 1916 to date, he has carried on investigations in fuel research problems in cooperation with the Northwest Experiment Station, U. S. Bureau of Mines, at the University of Washington.

He has been associated with many organizations or agencies, both private and public, in general examination work and investigations in mineral resources throughout the Pacific Northwest and British Columbia since 1916. From 1934 to 1944, he was a member of the Industrial Minerals Committee, Washington State Planning Council, and from 1938 to the present he has acted as a consulting engineer with the U. S. Bureau of Mines.

Professor Daniels is the author of 60 bulletins, reports, papers and articles dealing with mining practice and methods, mineral resources, mineral economics, fuels, iron ores, non-metallics, and coal preparation.

He is also a member of the American Institute of Mining and Metallurgical Engineers, Canadian Institute of Mining and Metallurgy, American Society for Engineering Education, American Association Advancement Science (Fellow), Sigma Xi and Tau Beta Pi. He was chairman of the Puget Sound Chapter, ASM, for the 1941-42 term, was Assistant Coordinator, War Products Advisory Committee, ASM, from 1942 to 1944, and was a delegate to the First World Metallurgical Congress, ASM, in October 1951.

LIGHTING FOR TODAY

(From Page 33)

shows the appearance of the ceiling before and after the luve-tile sections were fitted in place. The simple method of installation of the suspended light strips and of the luminous sections, and the soft lighting effect of the finished portion of the new ceiling are all indicated. The results of the installation have been highly satisfactory to the building manager.

The requirements in the executive office shown included concealing existing sprinklers and a duct opening on converted warehouse office ceiling space. Excellent lighting was required from the luminous system for close work and for ordinary work. In addition to the working requirements of the two principals of the firm, the executive office serves as a model installation for the represented fluorescent strips used in the luminous system. The lighting is controlled so that either 50, 80, or 130 ft. candles can be obtained over the desk tops. The comfortable effect of high level, diffused illumination is astonishing, and points toward a tremendous potential means of solving many lighting problems.

The lighting installations described are representative of lighting for today's problem, and of the serious consideration required on each individual job. In each instance, the best solution for the client was achieved through cooperative planning and selection to provide adequate lighting levels plus pre-determined control of the light source and effects.

CALIFORNIA SEEKING YOUNG DRAFTSMEN FOR HIGHWAY JOBS

Civil Service examinations will be given, September 3 deadline, for a number of Junior Drafting aides in the highway building program. Requirements are high school education, including course in drafting, and six months of architectural or engineering drafting experi-

PICTURE CREDITS for this issue: Summerbell Roof Structures, Front Cover, Page 11; Haas & Associates, Page 8 (top), 9; W. Craig Stewart, Page 8 (Bottom); Timber Structures, Inc., Page 10, 12 (top); Photo-Art Commercial Studios, Page 12 (Bottom), 13 (Bottom), 14 (top); Associated Wood Products, Page 13 (top); Maurice Hodge, Page 15; Gordon W. Converse, Page 16 (top); Philip Fein, Page 16 (Bottom); Hedrich-Blessing, Page 17; Kawneer Company, Page 18, 19, 22 (Bottom); Hurl Schwartz, Page 20; Martin Moyer, Page 21, 23; Hainlin Studio, Page 22 (top); Moulin Studio, Page 24, 25, 30.

ence. Applications available in Sacramento, San Francisco, and Los Angeles, and at all offices of the State Department of Employment.

ENGINEER APPOINTED

Harvey F. McPhail, recently retired from the U. S. Bureau of Reclamation, has been appointed head of the Hydroelectric Division of the Kuljian Corporation, and will supervise the engineering and construction of water-power projects. Last year McPhail was awarded a Citation of Distinguished Service for his role in developing the vast power program of the U. S. Department of the Interior.

WILLIAM R. SEARS APPOINTED PACIFIC COAST REPRESENTATIVE

William R. Sears has been appointed Pacific Coast Manager of Sales Promotion and Publicity for the Sylvania Electric Products, according to an announcement by Garlan Morse, Pacific Coast Director of Sylvania sales.

WILLIAM R. SEARS
Sales Promotion

Sears joined the company in 1952 at Emeryville, California, as a field representative in the Lighting Division, following ten years work in the newspaper industry. He resigned from the New York Bureau of the United Press to accept a fellowship at Stanford University where he received his M.A. in 1951.

ILLINOIS SOCIETY OF ARCHITECTS ELECTS

At the recent annual meeting of the Illinois Society of Architects, held in Chicago, the following officers were elected for the ensuing year:

Architect Benjamin Franklin Olson (Chicago), president; A. Reyner Eastman (Rockford), 1st vice-president; Alexander L. Levy (Chicago), 2nd vice-president; Virgil E. Gustafson (Chicago), treasurer; Alfred F. Schimek (LaGrange), secretary, and Gerald L. Palmer (Chicago), financial secretary.

William P. Fox and Robert W. Layer, both of Chicago, were elected directors for three-year terms, and Harold Bradley (Rockford), M. R. Beckstrom Kreugel (Joliet), Granville S. Keith (Champaign), Edward E. Reddersen (Chicago), and David C. Wilson (Mt. Vernon), were named to the Board of Arbitration.

GYMNASIUMS—AUDITORIUMS

(From Page 17)

range of possibilities when an architect utilizes the full potential of these amazingly flexible creations. In the Orosi building he has kept his lines simple, using boomerang-type, built-up arches to span the fifty foot wide main hall.

In documenting the variety of opinions, ideas, methods and philosophies of a goodly number of western architects on this matter of low-cost public buildings, these several points keep recurring. 1) Availability of glu-lam arches, trusses and beams has opened up greater flexibility in design. 2) Costs have been reduced, to wit a saving of $12,000 on the Montana State University field house by using the largest laminated arches ever built. 3) Erection time of the building's frame is greatly reduced. 4) Much weight is saved by eliminating heavier materials. 5) Appearance of buildings has been improved with simpler and more honest lines. 6) In many cases walls can be eliminated entirely with the roof serving both functions. 7) Larger areas can be enclosed and covered without use of posts.

The square lines of traditional design once required in large buildings because of the limitations of mate-

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rials, has given way to a much simpler form of curved arches. The concept of the dual purpose wall and roof is made possible today because engineers and manufacturers have finally been able to place in the hands of imaginative architects a material which does not restrict him, but actually challenges him to give it a job it cannot do.

FUNDS FOR PLANNING STUDY AVAILABLE TO INSTITUTE

A grant of $85,000 from the Rockefeller Foundation will be used for a three-year study of "The Perpetual Form of the City" at the Massachusetts Institute of Technology, according to an announcement by Professor Frederick J. Adams, head of the Department of City and Regional Planning at MIT.

"The project will develop principles and techniques to be used by architects and city planners in designing a more satisfactory urban environment," said Professor Adams.

The research made possible by this grant will be conducted under the joint direction of Gyorgy Kepes, Professor of Visual Design in the MIT Department of Architecture, and Kevin A. Lynch, Assistant Professor of City Planning, and will be administered by the Urban and Regional Studies Section in the Department of City and Regional Planning. Other studies now underway at MIT include a regional analysis of industrial location, and the transportation and land development patterns of metropolitan areas.

CRANDALL OPENS ENGINEERING OFFICE IN LOS ANGELES

LeRoy Crandall, consulting foundation engineer, has opened offices at 1614 Beverly Blvd., Los Angeles.

EDUCATIONAL PROGRAM FOR PRESTRESSED CONCRETE

A special six weeks' course on prestressed concrete designed for contractors and inspectors was started by the University of California at Los Angeles, University Extension Center, 813 S. Hill street in mid-July.

Edward Rice, lecturer in engineering at UCLA, is in charge of the course, which covers the elementary theory of prestressed concrete design, construction layout and forming, placing of prestressing cables, field tolerances, stressing of cables, friction loss measurement and special handling of prestressed members.

George Youngclaus, field engineer for the Portland Cement Association in Los Angeles, will give a special lecture on high strength concrete for prestressing, including mixes, handling, placing and curing.

STATE BUILDERS' CONVENTION TO HEAR ARCHITECTS

A panel discussion by private architects and representatives of the California State Division of Architecture and public agencies on the subject of "Preparation and Submission of Bids for Public and Private Construction Work," will be a feature of the 30th annual convention of the State Builders' Exchange, scheduled to be held in Santa Monica on October 21 to 23.

BOGUS ENGINEER GETS JAIL TERM

The Municipal Court in Riverside, California, recently sentenced a man convicted of violating the law in falsely using the title "Structural Engineer," to three months in jail and a fine of $100.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

THE CASTLES OF GREAT BRITAIN. By Sidney Toy, FSA, FRIBA. The British Book Centre, Inc., 122 E. 55th Street, New York 22. Price $5.50. More than 200 illustrations.

The great range of castles and ancient fortifications which still stand throughout Great Britain form part of our architectural heritage. Some are now famous show-places, others are desolate ruins; but about them all for the unitiated there is an air of mystery. How and why were these massive buildings constructed? What was the purpose of building in this or that particular shape or form?

The book describes the construction and history of all the important castles, chiefly from the military aspect but also taking account of the domestic life within. Part of the author's plan is to describe siege operations, and to show how, as weapons developed, new means of defense were evolved to counter them, thus a history of British fortifications from the primitive earthwork to the artillery-fort is presented.

The author is both an architect and a historian and has personally surveyed all of the castles he describes.

HISTORY OF AMERICAN INDUSTRIAL SCIENCE. By Courtney Robert Hall. Library Publishers, 8 W. 40th Street, New York 18. Price $4.95

Gives timely recognition to the inter-relationship of scientific research and industrial management in American industry. The book has been prepared by what is in many ways a unique method. While ample attention has been given to the historic development of the industry, bold and original use of new industrial material has been made. This new material has been furnished by sixty of the leading corporations in America, thus giving the book a current character quite unlike the usual volume on industrial history.

The author has interpreted a wide variety of concise facts on American industry in terms of such vital factors as our national defense and other possibilities of future social and political developments in the western world. Prof. Courtney Robert Hall has been a professor of American history for more than twenty-five years and is currently teaching at Queens College in New York.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Aluminum floodlight. A new aluminum floodlight pamphlet; drawings illustrate typical installations and uses; specification charts; large list of accessories. For copy write DEPT-A&E, Stcher Mfg. Co., Broadview, Ill.

Planning and decorating bathroom book. New 20-page booklet in full color, entitled "Planning and Decorating Your Dream Bathroom"; shows smartly styled bathroom fixtures; ideas for planning a distinctive bathroom, and dozens of color combinations and decorator tips on how to make any bathroom more attractive and enjoyable; many illustrations; remodeling suggestions to save time and expense. For free copy write DEPT-A&E, Universal-Rundle Corpn, River Road, New Castle, Pa.

Plug valve actuators. An 8-page bulletin describes tandem type actuators for valves requiring relatively high torques to operate, and the new floating bar type actuators for use on valves requiring lower operating torques. The bulletin also shows actuator selection table, typical applications, dimensions and weights, and various mountings. Copies are available by writing DEPT-A&E, Ledeen Mfg. Co., 1600 S. San Pedro St., Los Angeles 15.

Home heating and air conditioning. New booklet just issued gives complete data on 12 Plans for Home Heating and Air Conditioning; includes drawings, photographs and equipment specifications. Various types of installations are shown in relation to area of home to be heated or cooled. Description also included on units using oil, gas, coal. FREE copy write DEPT-

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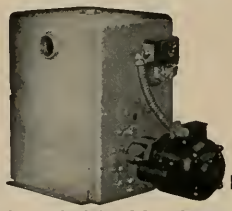

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CATALOGUES — Available

A&E, Iron Fireman Mfg. Co., 3170 W. 106 St., Cleveland 11, Ohio.

Metal lath data. Three basic types of metal lath, flat expanded, rib and sheet lath, are the subject of a technical bulletin—includes weights per square yard, size of sheets and the uses of various laths. Maximum spacing of supports for metal lath is given in inches, in an easy-to-read chart. Copy is free—write DEPT-A&E, Metal Lath Manufacturers Assn., Engineers Building, Cleveland 14, Ohio.

Steel roof decks. Specifications for the Milcor Steel Roof Deck and complete installation data are covered in a new catalog; helpful features include: a safe loading table, suggested architect's specifications, welding and insulation procedures, roof deck accessories, application details and use of roof deck forms. Copy of this new Catalog No. 240 may be obtained by writing DEPT-A&E, Inland Steel Products Co., 4157 W. Burnham St., Milwaukee 1, Wis.

"The Executive Mansion," A.I.A. File No. 14-D gives illustrations and detailed drawings of the revisions made in the remodeling of the White House in Washington, D. C. Copies available by writing DEPT-A&E, National Association of Architectural Manufacturers, 228 N. LaSalle St., Chicago 1, Ill.

"Piping for Permanence." 32-page bulletin containing illustrated, helpful technical data based on an analysis of thousands of piping systems in which wrought iron is specified to help solve corrosion problems; section devoted to a round-up of wrought iron pipe installations, a review of piping properties essential to long and economical service life, descriptions of individual service in building piping systems and recommendations to help reduce the rate and severity of corrosion; section devoted to water analysis and treatment. For copy write DEPT-A&E, Engineering Service Dept., A. M. Byres Company, Pittsburgh, Pa.

Farm lighting. New catalog covering yard lighting; includes economy, quality and deluxe lighting units with steel, aluminum or die cast magnesium reflectors; also included is an exclusive yardlight using a standard three-light bulb. Copy available by writing DEPT-A&E, Steber Mfg. Co., Broadview, Ill.

Painting manual. A handy guide for those who maintain schools, churches, offices, city and county buildings, this colorful booklet contains charts listing interior and exterior surfaces of all types, together with recommended paints or protective coatings and guide to proper preparation of various surfaces; useful coverage chart gives the average coverage per gallon of 20 different types of coatings. For copy write DEPT-A&E, General Paint Corp., P. O. Box 3474, Rincon Annex, San Francisco.

Bronze and aluminum letters. A new catalog, including full alphabets in six different styles, five of which are available in both oval and flat face; letter styles include classic Roman, block, ribbon, and two modern adaptations of the block letter; the sixth style is a modern sans serif letter cast integral with an inconspicuous letter bar; table of dimensions of letter heights, face stroke and letter depth. Copy available by writing DEPT-A&E, Oregon Brass Works, 1127 S.E. 10th Ave., Portland 14, Oregon.

Phases of architectural woodwork. Technical brochure by Architectural Woodwork Institute shows outstanding installations of various types of wood windows currently being used in hospitals and schools and demonstrates how wood windows can be adapted to a variety of operating mechanisms; data is valuable for softwoods and hardwoods. Copy free by writing DEPT-A&E, Architectural Woodwork Institute, 332 So. Michigan Ave., Chicago 4, Ill.

Aluminum slide windows. A new 8-page two-color technical catalog contains full information and cut-away illustration showing ball bearing rollers and double weatherstripping; chart shows 50 standard sizes and contains full information about stacking and transom arrangements; includes technical drawings, specifications, and photos of typical installations in various parts of the country. For free copy write DEPT-A&E, Peterson Window Corp., 1377 E. 8 Mile Rd., Ferndale 28, Mich.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
Bun. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) ... $1.25
Carload lots, in bulk, per bbl. ... 3.40

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount on L.C.L. ... 2%

Trinity White, Medusa White, Calaveras White ... { 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. ... $12.05

Curing Compound, clear, drums, per gal. ... 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.62

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd ... $7.75
¾-inch to ¼-inch, per cu. yd ... 7.75
No. 6 to 0-inch, per cu. yd ... 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. ... $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	¼x2
	$	$	$	$
Clear Qtd., White	$425	$405		
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381 00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390 00
33/32 x 2¼ 2nd Grade	365.00
33/32 x 2¼ 2nd & Btr. Grade	375.00
33/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
1/8 in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
1/8 in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Absorbing Wire	.72 per □ ft.
1/8 in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
1/8 in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry 8 to 24 ft.	185.00

Plywood, per M sq. ft.

¼-inch, 4.0x8.0-515	$135.00
½-inch, 4.0x8.0-515	200.00
¾-inch, per M sq. ft.	260.00
Plyscord	11½c per ft.
Plyform	19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $43.50
Standard Ribbed, ditto $47.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard	$ .75
Three-coat work	per yard	1.00
Cold water painting	per yard	25c
Whitewashing	per yard	15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Wholesale

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless.
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" .... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot

	Small Lots	Large Lots
Patio Tile—Niles Red	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—

8x5½x12-inches, per M.	$139.50
6x5½x12-inches, per M.	105.00
4x5½x12-inches, per M.	84.00

Hollow Tile—

12x12x2-inches, per M.	$146.75
12x12x3-inches, per M.	156.85
12x12x4-inches, per M.	177.10
12x12x6-inches, per M.	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
THE CAMBRIDGE TILE MFG. CO. *(35)
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tucson, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KI 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

CLINIC BLDG., Sunnyvale, Santa Clara County. Drs. Howard Diesner and George Armanin, Sunnyvale, owners. Frame and stucco construction to provide facilities for six doctors, X-ray and laboratory—$100,000. ARCHITECT: Lawrence W. Gentry, Los Altos. GENERAL CONTRACTOR: Oscar H. Liebert, Sunnyvale.

CHURCH AND PARISH HALL, St. Francis Parish, East Palo Alto, San Mateo County. Roman Catholic Archbishop of San Francisco, San Francisco, owner. 1 story frame and stucco construction; 11,000 sq. ft. floor area; structural steel and wood frame, tile roof, asphalt tile floor, wood floor, forced air heating—$176,000. ARCHITECT: George J. Steuer, San Leandro. GENERAL CONTRACTOR: W. A. Moroney, Burlingame.

HAMLIN SHOPPING CENTER, South San Francisco. Hamlin Shopping Center, South San Francisco, owner. 1-story supermarket and stores, reinforced concrete tilt-up construction, wood roof—$121,000. ARCHITECT: Ward & Bolles, San Francisco. GENERAL CONTRACTOR: Payne Const. Co., Oakland.

OFFICE AND FACTORY: Los Angeles. Firestone Tire & Rubber Co., Los Angeles, owner. 1-story and part basement and part mezzanine office and factory building; 155,000 sq. ft. of floor space (basement and mezzanine 90,000 additional sq. ft.); steel deck with built-up roofing, steel columns, pre-cast spendrels, exterior concrete walls, tapered steel girders, metal sash, concrete floors, roof ventilators, painting, plumbing, electrical work, air conditioning in mezzanine. ARCHITECTS: Pereira & Luckman, Los Angeles. GENERAL CONTRACTOR: H. K. Ferguson Co., Los Angeles.

DETENTION HOME, Napa. County of Napa, owner. 1 story concrete block and reinforced concrete construction; 8,150 sq. ft. floor space; radiant heating, detention windows—$133,868. ARCHITECT: Russell G. De Lappe & Mitchel Van Bourg, Berkeley. GENERAL CONTRACTOR: A. A. Douglas, Napa.

CHEMICAL PLANT, Attalia, Washington. Columbia River Chemicals, Inc., Attalia, owner. Complete chemical plant to produce ammonia, urea, etc., for agricultural purposes—$12,000,000. GENERAL CONTRACTOR: Fluor Corpn, Los Angeles.

SHOWER & LOCKER ROOMS, Washington Jr. High School, Salinas, Monterey County. Salinas Union High School Dis-

trict, Salinas, owner. Frame and stucco addition for boys and girls showers and locker rooms; composition roofing, concrete floors, ceramic tile walls and floors—$106,873. ARCHITECT: Butner, Holm & Waterman, Salinas. GENERAL CONTRACTOR: Tombleson & Huck, Salinas.

BANK BLDG., Yreka, Siskiyou County. Bank of America, San Francisco, owner. 1 story and mezzanine, concrete block and frame construction—$125,404. GENERAL CONTRACTOR: K. J. McGranahan, Santa Cruz.

CHURCH, Buddhist, Lodi, San Joaquin County. Japanese Buddhist Church, Lodi, owner. 1 story concrete block and frame construction; laminated beams; also a frame and stucco residence — $53,183. STRUCTURAL ENGINEER: Ohm & Eckland, Stockton. GENERAL CONTRACTOR: Heib Bros., Lodi.

PHYSICAL EDUCATION BLDG., Canoga Park High School, Los Angeles County. Los Angeles Board of Education, Los Angeles, owner. Reinforced concrete physical education building, composition roofing, concrete floor, wood floor, metal sash, painting, plastering, plumbing, electrical work, acoustical work, heating and ventilating, sheet metal, structural and miscellaneous metal, toilet partitions, ceramic tile—$449,795. ARCHITECT: H. C. Chambers and Lester H. Hibbard, Los Angeles. GENERAL CONTRACTOR: Harwick & Son, Hollywood.

Y.M.C.A. BLDG., Beverly Hills, Los Angeles County. Y.M.C.A., Beverly Hills, owner. Two and one-half story masonry building; 18,000 sq. ft. floor area; caissons, steel frame, composition roofing, concrete slab and asphalt tile floors, acoustical tile, steel sash, air conditioning, ceramic tile, toilets, electrical work, swimming pool. ARCHITECT: Hudson & Brockow, Los Angeles. GENERAL CONTRACTOR: Morley Building Company, Beverly Hills.

CHEMICAL FACTORY, offices and warehouse, Sunnyvale, Santa Clara County. R. M. Hollingshead Corpn, New Jer-

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	3.00	3.00	3.00	3.00	3.00
REINF. STREET	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.165			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
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*6 Hour Day. **7 Hour Day. ***Before C.I.S.C for 15c increase.

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sey, owner. 1-story (part 3-story) structural steel frame construction containing 100,000 sq. ft. floor space; reinforced concrete tilt-up walls, sprinkler system—$1,500,000. ARCHITECT: John S. Bolles, San Francisco. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

MEDICAL BLDG., Pasadena, Los Angeles County. Owner c/o Architect. 1 story and basement, frame and stucco, board and batten and stone veneer; 5000 sq. ft. floor area, built-up roofing, concrete slab and rubber tile floors, aluminum sash, plate glass, plaster work, wood paneling, air conditioning, electrical work, plumbing, asphalt paving. ARCHITECT: Henry Eggers, Los Angeles. GENERAL CONTRACTOR: Owne T. Reeves, Pasadena.

NEW HIGH SCHOOL, Caruthers, Fresno County. Caruthers Union High School District, Caruthers, owner. Frame and stucco high school building including classrooms, administration offices, library, shops, shower and locker rooms, toilets; concrete floors, radiant heating, asphalt tile floors—$598,500. ARCHITECT: William Hastrup, Fresno. GENERAL CONTRACTOR: Floyd G. Borchardt, Stockton.

SHRINERS HOSPITAL ADD'N, San Francisco. Shrine Hospital for Crippled Children, San Francisco, owner. One 2-story and one 3-story wing additions to provide additional surgical and clinical facilities; structural steel frame and reinforced concrete construction — $350,000. ARCHITECT: Stone & Mulloy and S. P. Marriccini, San Francisco. GENERAL CONTRACTOR: Wagner & Martinez, San Francisco.

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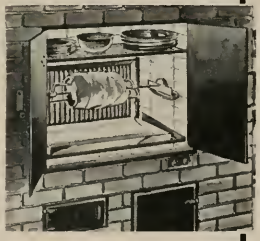

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CHURCH ADDITION, Sacramento First Baptist Church, Sacramento, owner. Frame and stucco construction; Chapel, offices and classrooms, $148,000. ARCHITECT: Chas. F. Dean, Sacramento. GENERAL CONTRACTOR: C. J. Hopkinson, Sacramento.

OFFICE-WAREHOUSE, Alhambra, Los Angeles county. Los Angeles Drug Co., Los Angeles, owner. One-story, 8-room precast concrete panel wall office and warehouse building; 58 x 172 feet in area, built-up composition roofing, steel sash, plate glass windows, concrete slab floor, composition flooring in office and toilet rooms, interior plaster, aluminum, steel and wood doors, alcohol storage rooms with explosive-proof hatches, $55,000. ENGINEER: Earl M. Bennetsen, Alhambra. GENERAL CONTRACTOR: William J. Moran Co., Alhambra.

SWIMMING POOL, Capuchino High School, San Mateo county. San Mateo Union High School District, San Mateo, owner. "L" shaped pool, reinforced concrete; 14 ft. reinforced concrete wall and foundation for future roof; wood bleachers, asphalt paving, $118,700. ARCHITECT: John C. Warnecke, San Francisco. GENERAL CONTRACTOR: William & Burrows, Belmont.

HOSPITAL BLDG., Ukiah, Mendocino county. Ukiah Hospital Corp., Ukiah, owners. First unit, 45 beds, 2 operating rooms, 2 delivery rooms, X-ray and laboratories; 1-story, concrete block and frame construction, asphalt tile floors, 21,000 sq. ft. of area, $292,750. ARCHITECT: Erling Clausen, Sacramento. GENERAL CONTRACTOR: Wilson, Penner & Slater (Joint Venture) Ukiah.

ELEMENTARY SCHOOL, Roosevelt School, Kern county. Roosevelt Elementary School District, Taft, owner. Rehabilitation of the basement, construction of two classroom wings, auditorium and multi-purpose room, administration and health facilities; frame and stucco construction, composition shingle roofing slab floor, hot water unt, heating, insulation, sheet metal, steel sash, steel roof trusses, tile, aluminum louvres, $625,000. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: Ashby & Opperman, Bakersfield.

AIRPORT JR. HIGH, Los Angeles. Los Angeles Board of Education, Los Angeles, owner. Twenty-five classrooms, administration, health, counselling unit, library, auditorium to seat 850, two choral music, instrumental music, two typing, art and arts and crafts, two science, two clothing, two foods, all purpose, electric and general metal shop, drafting and handicraft, graphic arts, agriculture, boys and girls physical education building, multi-purpose and cafeteria, student store, sanitary facilities and site development; composition roofing, concrete floors, asphalt tile floor covering, acoustical work, heating, ventilating, $2,077,777. ARCHITECT: Kistner, Wright & Wright, Los Angeles. GENERAL CONTRACTOR: McDonald Bros., Los Angeles.

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MOTEL, Las Vegas, Nevada. Roulett Motel Co., Las Vegas, owner. Thirteen-unit, concrete construction, 30 x 201 ft., $41,000. ARCHITECT: John Replogle, Las Vegas. GENERAL CONTRACTOR: Glazier Hall & Barrick Construction Co., Las Vegas.

MACHINE SHOP, Redwood City, San Mateo county. Acme Machine Co., Redwood City, owner. One-story concrete block, wood roof trusses, 60 x 140 ft., $41,891. ENGINEER: Robert O. Wilhelm, Redwood City. GENERAL CONTRACTOR: Stevenson-Pacific Co., Redwood City.

SORORITY HOUSE, West Los Angeles. Alpha Epsilon Phi, Inc., West Los Angeles, owner. Demolition work, composition roofing, plywood, rubber and cork and linoleum floors, cabinet work, stone veneer, electrical, new stall showers, steel sliding doors, forced air heating, 83 x 48 ft., $44,934. ARCHITECT: George C. Anderson, Santa Monica.

GENERAL CONTRACTOR: Ross Construction Co., Los Angeles.

POST EXCHANGE BRANCH, Travis Air Force Base, Solano county. Corps of Engineers, U. S. Army, Sacramento, owner. One-story frame and stucco, paved areas, partitions in aircraft shop, asbestos shingles on exterior, 61 x 168 fet., $125,337. GENERAL CONTRACTOR: Pacific Coast Bldrs., San Francisco.

ASSEMBLY & CHECK-OUT, Hughes Aircraft Co., Tucson, Arizona. Hughes Aircraft Company, Tucson, owner. Final assembly and check-out facility comprising 24 buildings, site grading and drainage, excavating, concrete, structural steel, prefabricated buildings, corrugated metal roofing, waterproofing, built-up roofing, sheet metal and metal equipment, steel rolling doors, fire doors and frames, metal windows, toilet enclosures and movable partitions, glass and glazing, ceramic tile, asphalt tile, acoustic tile, plumbing and compressed air systems, air conditioning systems, heating systems, fire protection, telephone system, fire alarm system, security training system, water well and deep well turbine pump, paving, railroads, fencing and gates, $1,616,000. ENGINEERS: Holmes & Narver, Los Angeles. GENERAL CONTRACTOR: M. M. Sundt Const. Co., Tucson.

HIGH SCHOOL, Upland, Los Angeles county. Chaffey Union High School District, Ontario, owner. Pre-cast construction, administration building, snack bar, two classroom buildings, science building, homemaking building, library, gymnasium and shop building, total area of 108,000 sq. ft.; composition roofing, concrete slab floors, asphalt tile, poured gyp-

sum roof decks, structural steel, steel sash, solid plaster partitions, acoustical tile, forced aid heating with baseboard registers, toilet rooms, electrical work, $1,114,870. ARCHITECT: Neptune & Thomas, Pasadena. GENERAL CONTRACTOR: Louis C. Dunn, Los Angeles.

SANCTUARY, El Monte, Los Angeles county. Church of the Nazarene, El Monte, owner. Bar tile roofing, wood trusses, two-plate girders with 58-ft. span set on steel pipe columns, concrete slab floors with asphalt tile flooring in aisles, fixed pews, art glass windows and steel sash, forced air heating and ventilating, panic door hardware; 84 x 104 ft. in area. ARCHITECT: Arthur W. Angel, Montebello. GENERAL CONTRACTOR: Homer M. Gilmore, Pasadena.

IN THE NEWS

ROBERT W. RAY NAMED WARD HEATER MANAGER

Robert W. Ray, formerly of Petaluma, California, has been named general manager of the Ward Heater Company of Los Angeles, according to an announcement by C. A. Miller, company president.

Ray was formerly connected with the Kresky Mfg. Company, and has a long and varied experience in the heating equipment field. He succeeds Russell Jarrett, vice president of the firm, who is retiring.

NEW SCHOOL FOR POMONA

Architects Marston & Weston of Pasadena recently completed plans for construction of a reinforced concrete junior high school building for the City of Pomona.

To be known as the West Side Junior High School the first unit will total 67,000 sq. ft., including 16 basic classrooms and 11 special classrooms. In addition there will be 2-unit separate shop building, kitchen and luncheon area. Estimated cost of the project is $810,000.

DRIVE-IN RESTAURANT

Architect John B. Anthony of Oakland is completing plans for the construction of a Drive-In restaurant near the city of Sacramento in Sacramento county.

The building will be of 1 story frame and stucco construction, iwth lots of glass and some stone veneer. Estimated cost is $75,000.

NEW KERN COUNTY SCHOOL PLANNED

Architects Wright, Metcalf & Parsons of Bakersfield are preparing working drawings for the construction of a new school building in Maricopa, Kern county, for the Maricopa Unified School District.

The project will include 27 classrooms, 102,800 sq. ft., administration building, auditorium, music room, homemaking room, cafeteria, art and shop building, library building, gymnasium, and double kindergarten. Estimated cost of the project is $1,200,000.

SACRAMENTO HEALTH CENTER

Plans have been announced for the development of a $400,000 Health Center building for the city of Sacramento as an addition to the Sacramento County Hospital. It will comprise a 1-story reinforced concrete structure with metal partitions, acoustical tile ceilings and asphalt tile floors, according to architects Franceschi & Mullen of Sacramento who are working on preliminary drawings.

LOW RENT HOUSING FOR SAN FRANCISCO

The Housing Authority for the City and County of San Francisco is working on another low rent housing project in the Hunter's Point district which will comprise some 226 units and will cost approximately $2,250,000.

Paul A. Ryan and John M. Lee of San Francisco are the architects.

JOHNSON APPOINTED IDAHO AEC OFFICE

Allan C. Johnson, instructor in architecture at Pratt Institute during 1941 and 1948, has been appointed manager of the U. S. Atomic Energy Commission's Idaho Operations Office, according to an announcement by AEC General Manager K. D. Nichols.

He will be responsible to the AEC for the operation of the National Reactor Testing Station.

STANDLEY TOOL EXPANDS PACIFIC COAST SERVICE

Several new distributors for "Tuff-Tooth" saw blades have been appointed on the Pacific Coast, according to a recent announcement by Gordon Taylor, general sales manager for the Standley Chrome Tool Company.

The American Saw and Knife Works, Ltd. has been appointed in the Los Angeles area; Chown Hardware Co., Portland, and the Campbell Industrial Supply Co., Seattle, will represent the Pacific Northwest. C. W. Marwedel Co., San Francisco, and Haven Tool and Saw Co. will serve as northern California representatives, and the Commercial Hardware Company, Reno, will serve the Nevada area. General offices of Standley are located in Berkeley, California.

ARCHITECT DESIGNS USED CAR SALES LOT

The Waale Camplan Construction Company recently completed construction of a used car sales lot for the Barnard Motors in Portland, Oregon, which was designed by Architect Morgan H. Hartford, AIA.

The project involved removal of a 1-story building, excavation, underpinning

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of the one story building at the rear of the lot; concrete retaining walls, ramp, protective pipe railings, a metal sales office, black-top yard paving, floodlighting, signs, and a new driveway. Size of the yard is 95 ft. by 100 ft.

COMMERCIAL BUILDING AND WAREHOUSE

The architectural firm of Caldwell, Mason & Muntz, Architects and Engineers, have completed working drawings for the construction of a 1-story, concrete block commercial building and warehouse in Downey.

The building will contain 4100 sq. ft. of floor space, built-up composition roofing on 2-in.-wood deck; steel sash, plate glass store front, laminated beams, concrete slab floors, fluorescent lighting and acoustical ceilings.

TURKEY RANCH ADDITION

Architect Maurice H. Robertson and John W. Gallareto of Palos Verdes Estates (Los Angeles county) are completing plans for the construction of a concrete block addition to the Mira Loma Turkey Ranch near Torrance.

The addition will consist of a killing room and a storage room, with a total area of 1400 sq. ft.; composition roofing, concrete slab, steel doors and sash, rotary roof ventilators, floor drains, septic tank and cesspool.

NEW HOTEL LAS VEGAS

Architects Wayne D. McAllister and Wm. C. Wagner of Los Angeles are working on preliminary drawings for construction of a 10-story, reinforced concrete hotel building to be built in Las Vegas, Nevada, for Louis Lurie of San Francisco.

The ground floor will measure 200 x 130 ft. and the upper floors 130 x 50 ft. in area; composition roofing, concrete floors, asphalt tile and carpeting, structural and miscellaneous metal, store fronts and ceramic tile.

STANFORD PLANS MEMORIAL HALL

The Stanford University (Palo Alto) Board of Trustees are planning the construction of a 100-man capacity dormitory to be constructed on the university's campus and to be known as the Crothers Memorial Hall.

The architectural firm of Spencer & Ambrose, San Francisco, have been commissioned to design the three-story reinforced concrete building which is estimated will cost $400,000.

ARCHITECT SELECTED

The architectural firm of Kitchen & Hunt of San Francisco have been commissioned by the Regents of the University of California to design and prepare plans for the construction of a Landscape Management Field headquarters on the University of California campus at Davis.

CONVALESCENT HOSPITAL

The Trinity County board of supervisors recently announced the construction of a 32-bed addition will be made to the Trinity County Hospital in Weaverville. Of 1-story concrete block and frame construction with concrete slab floors, aluminum roof, aluminum sash and asphalt tile floors, the addition will cost approximately $100,000.

Albert W. Kahl, San Mateo, is the architect.

NEW GIRLS GYMNASIUM

The Stockton Unified School District, Board of Trustees, announced the construction of a girls gymnasium building in conjunction with the Edison High School in Stockton, at an estimated cost of $100,000.

Peter L. Sala, Stockton, is the architect.

HARTNELL JUNIOR COLLEGE BUILDING

The Hartnell Junior College District has announced plans for the construction of a new Student Union building on the campus at Salinas, California, at an estimated cost of $100,000.

Architect Jerome Kasavan of Salinas is preparing plans and specifications.

PRESBYTERIAL CHURCH AT POINT LOMA

Architect Richard G. Wheeler and Associates of San Diego are preparing plans for the construction of a new Westminster Presbyterial Church to be built at Point Loma, San Diego county.

The 1-story building will be of frame construction, with shingle roof, warm air heating, asphalt paving, wood roof trusses, vault door, metal lathe and will contain 5000 sq. ft. in area.

GYMNASIUM POINT ARENA

The Point Arena Union High School District (Mendocino county) commissioned the architectural firm of Falk & Booth of San Francisco to draft plans and specifications for the construction of a new gymnasium building for the high school in Point Arena.

The new frame and stucco building will also contain boys and girls shower and locker rooms.

CO-OPERATIVE APARTMENT

Plans have been announced for the construction of a 14-story, type I, cooperative apartment building in Oakland at an estimated cost of $1,633,000.

The architectural firm of Reimers & Overmire of San Francisco are working on preliminary drawings, which call for a 2-level basement garage with space for

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HIGH SCHOOL ADDITION

Architect L. F. Richards of Gilroy is working on drawings for the construction of an addition to the Gilroy Union High School which will be of frame and stucco construction and will cost an estimated $480,000.

ARCHITECT SELECTED

Architect Gardner A. Dailey of San Francisco has been commissioned by the Board of Regents of the University of California to design a new Social Science and Art Building to be erected on the Berkeley campus.

THURSTON KLAYTON CHIEF ENGINEER

Thurston Klayton, former Los Angeles engineer, has been appointed chief engineer of the Luria Engineering Company, producers of standardized steel industrial buildings and airplane hangars, according to an announcement by Herbert B. Luria, president.

Fabrication plant is located at Bethlehem, Pa.

BUILD ANNEX TO MASONIC TEMPLE

The Masonic Hall Association of Reno, Nevada, have announced plans for the construction of a 4-story, with basement, addition to the Masonic Temple in Reno, at an estimated cost of $870,000.

The building, being designed by architect Russell Mills of Reno, will be occupied on the first floor by a store and bank; the second floor will be devoted to lodge rooms; the third floor will be a banquet room, with complete facilities including kitchen; and the fourth floor will contain an auditorium and theater.

ROBERT FREMONT NAMED NATIONAL SALES MANAGER

Robert Fremont has been named National Sales Manager of the Marvin Mfg. Company, and Carl Anderson appointed District Sales Manager for Southern California and Arizona, according to a recent announcement by Sam Beber and Jerry Feig, owners of the firm.

The new appointments expand facilities of the firm in the Pacific Coast and Chicago areas.

HALL OF JUSTICE FOR REDWOOD CITY

The San Mateo county board of supervisors recently announced plans for the construction of a new Hall of Justice building to be built in Redwood City.

The new 4-story, structural steel and reinforced concrete building will contain eight new courtrooms, a new jail and sheriff's office, and will cost an estimated $1,780,000.

Michael Goodman of Berkeley is the architect.

JOINS SOUTHERN CALIFORNIA FIRM

E. H. Stau, one of America's authorities on blind rivets, has joined the Olympic Screw & Rivet Corpn., of Downer, California, according to a recent announcement by S. R. Maness, president of the firm, and will serve in the capacity of vice-president.

Stau has been associated with the aircraft industry since 1931, in both production and sales of blind rivets.

FRESNO SANDS MOTEL BUILDS

Work has started on the construction of a 1 and 2-story frame and stucco motel on highway 99 near Fresno, California, which will provide facilities for 90 units when completed. Also included in the project is construction of a coffee shop, dining room, and swimming pool.

Cost of the work is estimated at $400,000.

ARCHITECT SELECTED

The architectural firm of Clark & Stromquist of Palo Alto have been commissioned by the Palo Alto Unified School District to prepare plans for the construc-

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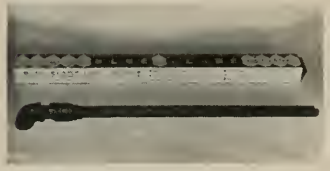
Symons Clamp and Mfg. Company recently granted to Concrete Forms, Inc., of Portland, Oregon, exclusive rights for assembly, sale and rental of the Symons forming System in the Pacific Northwest.

Concrete Forms, Inc. will supply the forming systems to Washington, Oregon, Alaska, and large areas of Idaho, Montana, and western Canada.

BLUE FLAME
LOG LIGHTER

The "Blue Flame" log lighter that burns a hot blue flame has been announced by the Midlee Machine Products Company of 14340 Calvert Street, Van Nuys, California.



This new burner features a jet air mixing chamber that quickly fires the log and saves gas. Overall length is 20½ in. and has 15 jet burner holes. Can be easily installed and has a b.t.u. rating of 32,000.

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MOVES OFFICE

Announcement has been made of the removal of the architectural offices of Wurster, Bernardi and Emmons in San Francisco to a new location at 202 Green Street, corner of Sansome and Green Streets in San Francisco.

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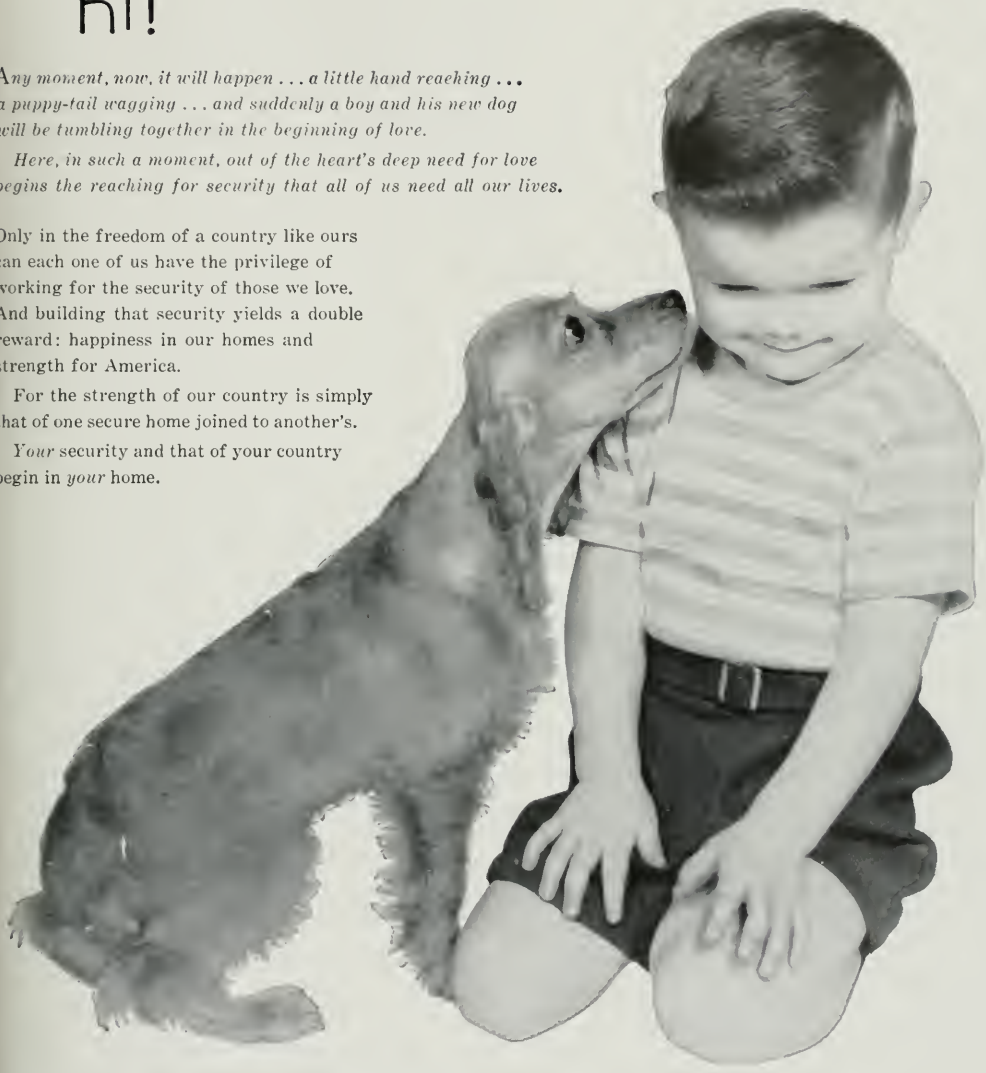
Any moment, now, it will happen . . . a little hand reaching . . . a puppy-tail wagging . . . and suddenly a boy and his new dog will be tumbling together in the beginning of love.

Here, in such a moment, out of the heart's deep need for love begins the reaching for security that all of us need all our lives.

Only in the freedom of a country like ours can each one of us have the privilege of working for the security of those we love. And building that security yields a double reward: happiness in our homes and strength for America.

For the strength of our country is simply that of one secure home joined to another's.

Your security and that of your country begin in *your* home.



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Eight million working men and women are building their security with the Payroll Savings Plan. For your sake, and your family's, too, how about signing up today? If you are self-employed, ask your banker about the Bond-A-Month Plan.

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SEPTEMBER 1954

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Vol. 198 No. 3

ARCHITECT AND ENGINEER

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COVER PICTURE

SOLVING BUILDING COSTS
ON STEEP HILLSIDES
Malabar Hill Home
Willamette Valley
Eugene, Oregon

Designed by
NORRIS M. GADDIS, A.I.A.
Architect

An unusual and striking new residence constructed on a hill side site which was designed by the architect to meet budget limits of the owner. For complete details, turn to Page 16.

Photos by
TOM BURNS, JR.

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. EDITORIAL NOTES .

WHY GO BACK TO SCHOOL?

You may be asking yourself, or someone may soon ask you, "Why go back to high school, or on to college?"

Vacations are a time for relaxing and having fun . . . or working at some "summertime job" that pays well and gives you money to spend as you wish. So, with the ending of summer, the question arises, "Shall I give up my job," or quit having "fun" and go back to school?

The answer is positive—stay in school!

Perhaps the most appealing reason is that better educated men and women earn more money. A recent survey shows that 82 per cent of men 25 years old and over earning $10,000 or more had high school or college education, while those with an eighth grade education or less had 77 per cent of the income below $500.

"There is a direct relationship between education level and earning power and, therefore, buying power in our total American economy," the study discloses.

But, there are other important reasons why a higher education is important: Persons with high school or college experience are more likely to become active in politics and hence better equipped to serve the public; they have a better understanding of the American system of business and living, and are thereby less susceptible to adverse influences.

Education helps people to be more efficient producers, more able to use and value political and economic freedom and to carefully preserve the essentials of an expanding, competitive economy under representative government.

* * *

The world's first passenger belt conveyor was put into operation at Jersey City, N. J. by the Hudson and Manhattan railroad. Operating at 120 feet a minute, the "speedwalk" will deliver walking passengers 227 feet up an inclined ramp in 35 seconds.

* * *

WRITING NEW TAX RULES

Indications are that it will take a sizeable staff of experts several months to write and put into effect the new regulations under provisions of the Internal Revenue Code of 1954, and until this has been done the Treasury Department has issued stop-gap regulations which in effect will continue the existing regulations.

The new Revenue Code embraces thousands of important changes from the old law, and Internal Revenue officials had declared as a matter of policy that no rulings will be made under the new Code until such time as the new regulations have been issued.

Taxpayers are urged to refrain from asking for rulings at this time, but are urged to obtain a copy of the new Code itself and study it.

* * *

The United States, with a rapidly climbing population estimated at 177 million by 1960, is growing and industry must grow with it, preferably ahead of it. Constant pounding on basic and applied research in industry is the best answer not only to expansion but also to national security.

* * *

ACCIDENT PREVENTION

Everyone knows that accidents add to the cost of doing business, and that repeated "experience" plus "revised rating" nibble at profits.

While statistics reveal 1953 as one of the safest years of record, and there were fewer on-the-job accidents than during the previous year, the record for this year can only show satisfactory results in decreasing the number of accidents if proper attention is given to safety programs.

Large organizations maintain safety projects in charge of competent staff members, small operations require a more individual effort. In either event safety is a program everyone should work at seriously.

A FAMILY AFFAIR

THE UNITED WAY

Mother and Father, Brother and Sister . . .
everybody benefits when everybody gives
The United Way

United Community Campaigns all over the nation are being inaugurated this month, supported and endorsed by President Eisenhower and leading civic, professional and business groups, and a large number of volunteer workers.

When it comes your turn . . . Give Generously to your Community's united campaign for voluntary health, recreation, family welfare and defense related services.

Let's face it!

HAVE YOU A DISASTER PLAN FOR YOUR PLANT?

BOMBS...OR FIRE...OR FLOOD...OR TORNADO ...you can handle them if you act now.

Let's face it... the threat of war and the atomic bomb has become a real part of our life—and will be with us for years. Fires, tornadoes and other disasters, too, can strike without warning.

Whatever the emergency is, everybody's going to want help at the same time. It may be hours before outside help reaches you. The best chance of survival for you and your workers—and the fastest way to get back into production—is to know what to do and be ready to do it. Disaster may happen TOMORROW. Take these simple precautions TODAY:

☐ **Call your local** Civil Defense Director. He'll help you set up a plan for your offices and plant—a plan that's safer, because it's integrated with community Civil Defense action.

☐ **Check contents** and locations of first-aid kits. Be sure they're adequate and up to date. Here, again, your CD Director can help. He'll advise you on supplies needed for injuries due to blast, radiation, etc.

☐ **Encourage personnel** to attend Red Cross First-Aid Training Courses. They may save your life.

☐ **Encourage your staff** and your community to have their homes prepared. Run ads in your plant paper, in local newspapers, over TV and radio, on bulletin boards. Your CD Director can show you ads and official CD films or literature that you can sponsor locally. Set the standard of preparedness in your plant city. There's no better way of building prestige and good community relations—and no greater way of helping America.

Act now . . . check off these four simple points . . . before it's too late.

NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering a variety of special exhibitions and resumption of many Museum activities starting with September.

Among the Exhibitions—Carl Bodmer Paints the Indian Frontier, 1833-1834, a group of watercolors and drawings from the Collection of Prince Karl Viktor zu Wied; an exhibition of Contemporary Stoneware from Sweden; Artists of Ireland, a display of Paintings, Sculpture and Textiles; Paintings and Drawings by Hyman Bloom—Retrospect Exhibition; and Drawings and Watercolors by Flemish and Dutch masters from the De Grez Collection of the Royal Museum of Fine Arts, Brussels.

Classes in Art Enjoyment for Adults, conducted by Charles Lindstrom, and designed for beginners, will be resumed starting September 25th, as will Art Classes for Children, which will be under the direction of Miriam Lindstrom and will cover the subjects of Picture Making, Art and Nature and the Art Club for older children. All classes are free.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, presents an Exhibition of Painting featuring Robert Gilberg, Henry Pancher, and Avrum Rubinstein during September.

Also featured is an exhibit of Sculpture by David Tolerton.

The "Pictures of the Month" display is a group of watercolors by William Dole, shown in the Little Gallery.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, has arranged the following schedule of exhibitions for September under the direction of Thomas Carr Howe, Jr.

Special Exhibitions: Ancient Art of the Andes—more than 400 priceless objects from private and public collections in South America, Europe, Canada and the United States; Early American Sculpture; The Horse in Painting; Photographs by Oliver Gagliani; Science Fiction Illustrations, and Paper Sculpture by William Shelley.

The Achenbach Foundation for Graphic Arts will feature at the Museum "Turn of the Century"—Impressionism to Realism in American Prints, and "New Directions in Contemporary Prints"; a loan exhibition at the San Francisco Public Library will show "A Graphic Panorama of the Rise and Fall of Napoleon."

Educational Activities include an Organ Recital each Saturday and Sunday afternoon at 3 o'clock; Motion Picture Series, Saturdays at 2:30 p.m.; and Painting Classes for Children, ages 6 through 14, each Saturday morning at 10 o'clock.

The Museum is open (free) daily.

EIGHTH ANNUAL SAN FRANCISCO ART FESTIVAL

Among entrants in this year's city-sponsored Art Festival, scheduled for the latter part of September at Aquatic Park, is the Society of Western Artists, American Institute of Architects, Chinese Art Association of the Bay Area, Art League of California, Graphic Arts Workshop, Sixth Army Arts and Crafts Program, Diablo Art Association, Professional Weavers Association, Photographers Gallery, Blind Center, Potters Association, and many non-affiliated artists and educational institutions.

"It will be the largest," declared Felix Rosenthal, director "and the jury comprising Abel Warshawsky, distinguished Carmel portrait painter; artist Louis Siegriest, Keith Monroe, sculptor; Trude Guermonprez; Viveca Heino of Los Angeles, and Hudson Roysher of Los Angeles, will have a wealth of material from which to choose the winner."

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, offers the following schedule of special Exhibitions and Events for September:

Exhibitions—Bridges are Beautiful, an American Federation of Arts Exhibition; Gio Ponti and Gyorgy Kepes—the work of two distinguished designers; a special showing in the Rental Gallery for Fall; the 18th Annual Watercolor Exhibition of the San Francisco Art Association; Three Bay Region Artists—Ruth Armer, Richard Diebenkorn and Ralph Du Casse; Perceptions—an exhibition of photographs; and the George Grosz Retrospective.

Special Events—Lecture Tours each Sunday at 3 p.m. based on current exhibitions; Wednesday Evening Discussions, a free discourse on art and related subjects, 8:30 p.m.; special motion picture films and

slides on California Bridge Builders; and the Museum services including the Library, Rental Gallery, and Bookshop.

Special activities including Adventures in Drawing and Painting, Art for the Layman, and the Children's Saturday morning Art Classes will be resumed starting September 24.

The Museum is privately supported by membership and contributions, for the instruction and enjoyment of the general public. Support it by becoming a member.

EXTENSION EXHIBITIONS IN ART AVAILABLE

Seven new exhibitions have been added to the group which the Extension Department of the San Francisco Museum of Art, War Memorial Building, Civic Center, has available for high schools, colleges, clubs, libraries and other organizations in northern California.

Included are: A Painting Develops, by Ralph Du Casse; The Landscape Painter, by Ray Strong; Lettering, by Seymour Locks and his class at the San Francisco State College; and Everyone Can Dance, by the Halprin-Lathrop Dance School, with photographs by Minor White and students at the California School of Fine Arts. Original works, color reproductions, photo-engraved panels, and other visual aids are mounted, ready for display, and with descriptive labels.

Another new service of the Extension Department

(See page 34)

M. H. DE YOUNG MEMORIAL MUSEUM
Golden Gate Park, San Francisco

Bacchantes

by

FRANCOIS BOUCHER

French, 1703-1770

Collection

Roscoe and Margaret Oakes

Construction uses a new method for casting and then placing precast concrete wall panel in position.

Color Television Studio

SPECIFICALLY DESIGNED FOR BROADCASTING

BURBANK, CALIFORNIA

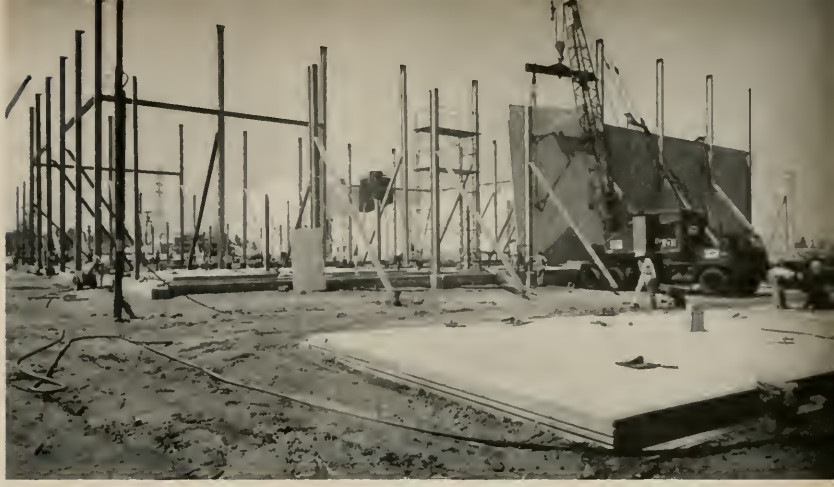
Thirty-five thousand square feet of precast concrete wall panels were lifted into place in four days in erection of the nation's first studio designed specifically for broadcasting live color television programs.

This record construction involved using special cranes to lift 84 precast concrete wall panels weighing twenty to thirty-five tons each onto the steel frame work of the new studio being built for the National Broadcasting Company at Burbank, California.

Two tiers of twenty foot wide panels, the lower row twenty-seven feet high, were erected to make up the 46-foot-high walls of the new studio.

The panels were poured on the site, on special "casting platforms" on the ground near their intended final position in the wall. They were lifted by means of lifting plates at the ends of cables that were in turn fastened to anchorages welded to the reinforcing steel in the panels.

The technique, together with other modern, speedy construction methods made possible by the studio's



Precast concrete wall panels are poured on special "casting platforms" near their intended erection area—above illustration shows how site looked at the start of one four-day push.

Speedy erection of precast concrete walls—the large lifting plate, raised by a special crane, picks up panels by means of cables fastened to anchorages welded to the reinforcing steel in panels.

advanced design, is enabling erection in record time. The Austin Company, designers of the building, were awarded a contract for construction on March 26, working drawings were started April 19, field work began May 3, and by October 1 the entire 60,000-square-foot structure is due to be closed in and substantially finished. After installation of all the necessary equipment, the first color TV broadcast is scheduled for early January, 1955.

The new studio is being constructed on part of the 48-acre site in Burbank where in 1952 were completed NBC's two large black-and-white television broadcasting studios. The color studio, 90 feet by 140 feet in area and 50 feet high, is southwest of the present buildings and will be connected to them by a service corridor. Within its modern exterior, there are a dressing room section adjoining the studio proper and a technical building, which will continue the basic design theme of the existing structure.

According to Gordon Strang, who is supervising construction for NBC, engineers will begin installing several hundred miles of wiring and many tons of control equipment around October 1. The electric load will be much greater than that for black-and-white TV broadcasting, requiring 1000 kw of electricity for stage lighting, 500 kw for technical services, and 500 kw to run the air conditioning system, which calls for 450 tons of refrigeration. TV viewers will be able to receive broadcasts from the new studio on either color or black-and-white sets, via RCA's compatible color broadcasting system.

35,000 sq. ft. of wall panels were erected in four days.

Shown here are the two tiers of 20 ft. wide precast concrete wall panels that make up the 46 faat high walls.

The wooden strips on the interiar of the panels are the "nailers" to which acoustical materials are later fastened.

Using up to the minute construction techniques some eighty-four precast concrete wall panels were prepared and installed in a recent four days.

Each of the panels weighed from 20 to 35 tons.

EAST BAY

Architects "Heart - Home"

Co-Sponsored by

ALAMEDA COUNTY HEART ASS'N.

EAST BAY CHAPTER A.I.A.

First reported in May "as a project on the planning table, the "Heart Home" architectural contest sponsored by the Alameda County Heart Association and the East Bay chapter of the American Institute of Architects is now under full way and receiving nation-wide attention.

Brainchild of East Bay architects and doctors, colleagues in the Heart Association, the contest is the outcome of questions one of them, an architect, started asking after he had a heart attack which forced him to restrict his activities: "There are 10,000,000 of us cardiac patients and millions of others with handicaps of one sort or another in the United States. Are the homes we're building suitable for people with reduced activity tolerance? The population in general is aging, and older people have to slow down their tempo of living, just like heart patients. Will these homes even be suitable for their proud owners as they grow older? Why not try to plan the whole home and its setting with the same care we now give to planning kitchens? How about easier-to-work-in offices for us middle-aged business and professional men?"

To find answers to these questions the two organizations jointly set up three "interneships"—scholarships—for senior architectural students, which would allow them to spend July-September in the Bay Area, combing architectural files, interviewing time-study engineers, doctors, architects and heart patients themselves to see what's available and what's needed and wanted in the way of work- and step-saving homes and work-places. The catalog of ideas the students compile will be made available to all schools of architecture in the country—and, of course, to all architects—for a nation-wide student home-design project. Best designs will then be made into a traveling exhibit.

Selected by their respective colleges of architecture as internes were: Piero Patri, son of famed San Francisco artist Giacomo Patri, by the University of California; Robert Peterson of Winslow, Arizona, Stanford; and George Collamer of Los Angeles, USC. Their scholarships cover only actual expenses while at work on the project. So their bread and butter has been most generously provided by Bay Area architects and engineers who were willing to arrange half-time jobs (three days one week, two the next) for raw recruits. Don Hardison of Richmond, East Bay AIA president, is sponsoring Peterson. George Collamer will work for Ray Confer and Fred Willis of Oakland while Patri's time will be shared by Russell DeLappe and Mitchell Van Bourg of Berkeley and H. J. Brunnier, San Francisco structural engineer. A unique feature of the jobs is that the wage scale was set at a "fair wage" determined by the UC student council. Additional help came from Hal Norton, Berkeley student co-op director, who authorized a room and board scholarship for the Los Angeles student.

The students' summer work, coordinated architecturally by Hans Ostwald, Professor of Architecture at California, and medically by Dr. Gordon Lamb of Oakland, will go like this: First, all three have collaborated on a searching questionnaire which the Womens' Architectural League is using for interviews with heart

(See page 34)

FOUR BAY AREA architectural firms are sponsoring the senior architectural students shown above: Piero Patri, UC, seated left, co-sponsored by Russell De Lappe, standing behind, of De Lappe & Van Bourg, Berkeley and H. J. Brunnier, Structural Engineer, San Francisco; George Collamer, USC, sponsored by Ray Willis, Confer & Willis, Oakland; and Robert Peterson, Stanford, sponsored by Don Hardison, Richmond.

THE CELLS—8'9" by 12'6" and 8'9" by 5', are transported to site and bedded down on standard foundations. Standard brick veneer and marseilles tiles gave this row of units the appearance of a much more expensive construction.

NEW PROCESS - LOW COST

AUSTRALIAN HOMES

MELBOURNE, VICTORIA

By GEOFF de FRAGA

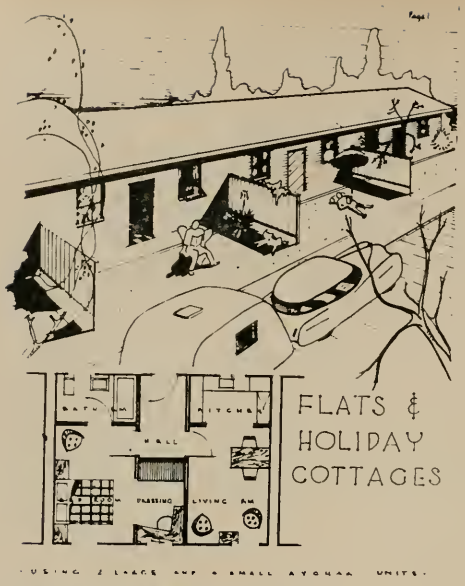
Australia's use of plaster for structural, load-bearing walls has branched out in a new direction—four complete walls and ceiling now poured in one unit.

Pre-cast at the factory, they are transported to site and there juxtaposed to form complete internal framework for dwellings which can be finished in a variety of ways.

Resulting from ingenious planning to conform with standard building regulations, the cast plaster cells are made of two sizes only, yet a wide variety of interior design is possible. Each room has one dimension of 8' 9", but while the length of the larger is 12' 6", the width of the smaller is 5' 0".

Some idea of the elasticity of design allowed by using rooms of only these dimensions can be gained by cutting a number of pieces of cardboard to scale and moving them into position to make complete houses, as shown in the accompanying plan.

The makers foresee still wider uses for the two standard cells. Hospitals, hotels, guest-houses, schools,



SIMPLE PLAN—Suitable for a flat or a holiday cottage, consists of four small and two large pre-cast shells.

factory offices, service stations, shops and railway station buildings are among the construction they deem practicable without using any more than the two standard cells.

Apart from its fire resistance, the increase in thermal and acoustic insulation, and the cheapness of plaster in those countries with adequate gypsum deposits, great savings are effected in labor normally used in other types of building.

Says the designer—a leading Melbourne architect named Bernard Evans: "The man wandering around with his three-foot rule is largely eliminated. The Aychar method also eliminates plastering, skirting, architraves, picture-rails, jambs, ceiling joists, fibroplaster ceilings, hangers, internal lintels and door frames."

The units bed down on any standard foundations—brick, wood, stumps or concrete. The inside only of the building is shop made, leaving the builder full scope for individual treatment externally.

Internally the house has the same advantages of cavity construction that were so highly prized when

Galvanized steel mesh is placed around dome-topped concrete mold for reinforcement. Door and window frames are put in position, on either side can be seen the two right-angled steel sections of framework, later to be rolled along diagonally placed rails and clamped together to leave a 2-inch space between steel and concrete, with pouring hole at the top.

double-brick construction was a commercial practicability. All conduit and piping can be installed and repaired cheaply and quickly, because an air cavity is left between the adjacent walls of any pair of cells.

As with the pouring of the single plaster wall that was hailed in Australia as a building revolution several months ago, doors and windows are set out in position before the plaster is poured.

In the Aychar house, each room has a domed ceiling, in the centre of which is a square opening for ventilation and flush lighting.

Speed of erection is another point in favor of the Aychar house, for which world patents have been obtained. The cells move on standard vehicles along standard roads, and within 24 hours of the delivery of the cells to the building site, all trades can begin work. Then, as with the Castley house, they stay on the job until their own particular responsibilities are ended. In construction of row houses and estates this saving in man-hours is considerable.

For the Aychar House—the result of five years'

(See page 35)

The bucket of mixed plaster is hoisted above aperture left by steel sections at the top of the mold, and material poured over domed concrete.

The poured cells are lifted clear of the domed concrete mold, and carried to a section of the factory for drying preparatory to installation.

The process of drying uses a stream of hot air generated by a large motor, with regulators for control of the drying process.

END VIEW shows simplicity of design.

SOLVING BUILDING COSTS ON STEEP HILLSIDES

EUGENE, OREGON

By ARTHUR W. PRIAULX

NORRIS M. GADDIS, A.I.A.
Architect

Verticality is the keynote . . . note sun screens ond beauty of exposed rigid frames.

Eugene is rapidly becoming known as a city of beautiful homes where a group of younger and imaginative architects have had free reign in developing some exceptionally distinctive homes with a definite regional theme and expression.

One of the more unusual and striking new residences in this group is this home on Malabar hill designed by Norris M. Gaddis, A.I.A.

The site commands a dramatic view of the city and surrounding country in the upper Willamette Valley. Architect Gaddis' problem was to utilize the rather steep hillside lot and at the same time to effect necessary economies in construction costs to fit within the budget limits of the client.

Gaddis found the solution to both of these problems by deliberately disregarding the difficult slope and designed a home that would stand on its own feet. By raising the structure off the ground he eliminated the usual costly grading, retaining walls, concrete foundations and drainage expense. At the same time he gained an unobstructed view for the rooms on the west side of the house which overlook the city. There is a definite feeling of suspension in this dramatic home.

The house is supported by a series of eleven rigid bent frames, glued at the joints with plywood gusset plates. The laminated rigid frames form the skeleton of the home and extensions of the frames, left exposed, become the posts and support members for the home. The frames were fabricated on the job.

Each bent frame is made up of two two-by-ten joists with a two-by-ten roof component. Legs on the down hill side are two-by-eight and the vertical members on the uphill side are two-by-six. Douglas fir dimension was used in the construction of the frames. The frames are on six foot centers with 10'6" spacing on the garage portion.

The area beneath the house is left open, so that drainage water from the hillside runs away without

OUTDOOR LIVING is more than a fad in the moderate northwest climate and this sundeck adapts to the hillside as cleverly as the home itself.

CLOSE-UP VIEW of built-in bookcase and full use of the wall for storage.

problem. A storage area has been closed in underneath the patio area under much of the house. Another deck patio has been constructed on the downhill side which is also supported by exposed timbers. This railed deck area is reached by a series of steps from the living room and is several feet below the level of the house, so as to avoid obstructing the vista from the viewside windows of the home.

Exterior walls of this unique house are two-inch, tongue-and-groove fir decking which eliminate the necessity of studs and saves 2″ of width for the perimeter of the house, a gain of 25 square feet of usable space. Additional air space for insulation of the walls is provided by the use of sheetrock throughout with wood stripping.

Ceilings of the interior are exposed two-by-four fir decking and the built up roofing was laid over 1″ of rigid insulation on this decking.

The floor was constructed of two inch tongue-and-groove fir decking over which a layer of concrete one

SPACE UTILIZATION is an interesting feature in this compact living room and walls have been designed to provide maximum storage to leave full wall on the view side unobstructed.

and five-eighths inches thick was poured. A cable was imbedded in the concrete mat to provide the electric radiant heating for the home. Cork flooring covers the slab in the living room, while linoleum was used in the kitchen and bath with asphalt tile in the bedrooms. The house contains living room, kitchen, two bedrooms and bath.

An interesting feature of the floor construction was the blocking up of the decking on the beams to give conduit space.

Among the distinguishing characteristics of many homes in the Oregon country from the design boards of the younger architects is the interesting development of the verticality theme which is definitely a regional expression as much as California architecture is to that region.

Homes are designed to complement the region, to fit into and become a part of the striking topography and

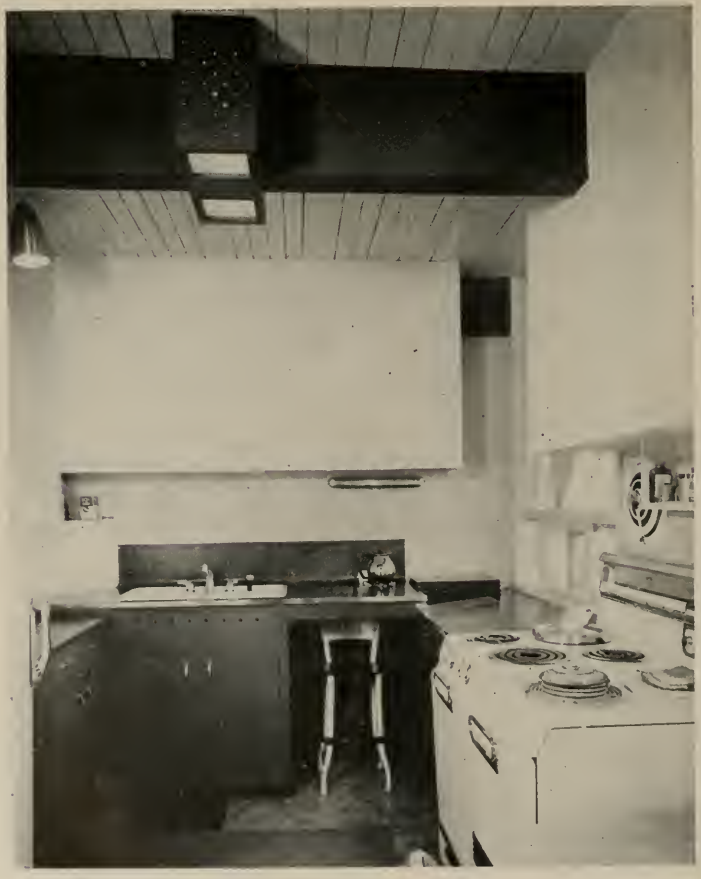
WARDROBES built into wall and windows along ceiling gives a maximum of utility living area.

ECONOMY OF CONSTRUCTION is well illustrated in this view of the living room seen from the window wall. Rigid frame members have been left exposed to give timbered effect and decking is ceiling.

the ever-present tall conifer trees. The vertical lines of this regional expression reach upwards like the trees and like the sharp pointed hills and mountains. Just like California's rambling, site-snuggling architecture conforms to the gently rolling, treeless hills, so does the Oregon theme adapt to this area which is unlike any other section of the nation. Extensive use of native materials and increasing utilization of natural woods of the region in harmony with rock, brick and glass assist the architect in developing an architecture which belongs to the rugged northwest and has specific topographical characteristics.

Gaddis has captured much of this spirit in this hillside home which is especially significant because the Malabar hill is covered with a growth of tall fir trees. The house itself seems divorced from the ground yet belongs to the site as much as the trees and the sharply rising hillside.

This interesting house is a new approach to an old problem of steep site adaptation. It represents a form of pioneering and a willingness of a client to let an imaginative architect have some latitude in a design which is somewhat radical and unconventional yet remarkably functional.



THE KITCHEN

Is convenient and follows the theme of the rest of the house.

Note interesting handling of ceiling lights in a perforated box-type fixture.

INSTALLATION OF THE 120-INCH TELESCOPE

Lick Observatory

Mount Hamilton

NEAR SAN JOSE, CALIFORNIA

By ROBERT O. VALENTINE, C.E.*

In the spring of 1952 the University of California t Berkeley published plans and specifications and re- uested bids for the fabrication and erection of a 120" flector-type telescope. This telescope was to be in- alled at the University's own Lick Observatory, hich is located on the top of Mount Hamilton some venty-five miles east of the city of San Jose, Califor- ia.

The Judson Pacific-Murphy Corporation of Emery- lle, California, submitted the one and only bid for the performance of this work. Subsequently, they were awarded the contract in June, 1952 for the sum of $938,000. This culminated six interrupted years of design work by the University of California which had been performed in close collaboration with the astronomers and engineers of the Palomar Observatory on Mount Wilson, California.

The engineering work on the design of the world's second largest telescope, which is to be the twin sister of the 200" Hale telescope at Palomar, was performed

BASE FRAME being set in place inside Observatory. This base frame weldment had to be stress-relieved in its entirety by heating in a huge oven to a temperature of 1150 degrees fahrenheit.

primarily by Mr. Joseph Nunn, mechanical engineer in Los Angeles, and Mr. W. W. Baustian of Lick Observatory.

The 120″ nomenclature applies to the diameter of the large circular mirror of the telescope. This six-ton piece of pyrex glass which is being used for the mirror was fabricated by the Corning Glass Company some years ago with the intention of using it in conjunction with the 200″ telescope at Palomar. However, the need for its use at that Observatory did not arise and, as a result it was—in effect—the inspiration for building a sister telescope on Mount Hamilton.

This instrument, in its primary function as a telescope, does not provide that astronomical observations be performed by visual means. Rather, the 120″ piece of glass has been ground and highly polished to form a concave surface which will ultimately be aluminized. Thus, having the qualities of a concave mirror, it will act in the capacity of an extremely large camera which will catch the light of the star under observation and reflect it back to a focal point some 52 feet away. At this focal point, a photographic plate is exposed to the reflected light on the star and a picture is taken. The picture of the star provides a permanent record which is always available for the astronomer's detailed study.

Difficulties involved in what would normally appear to be a simple operation are many because the star, in its movement through the heavens, must be tracked over a period of time which might range from thirty minutes to six hours—depending upon the brilliancy of the star under observation. As such, the motion of the telescope must be synchronized accurately with the motion of the star in order that the reflected light may be maintained in a permanent location on the photographic plate, thus assuring a clear picture. This synchronization of movement between the telescope and the star is maintained by two individual motions

TUBE SECTION ASSEMBLY in shop. Is approximately 43 ft. long and 13 ft. in diameter. Circular ring in foreground will receive the prime focus cage which houses photographic equipment and the astronomer. Circular ring in background will receive the mirror.

Erection of fork assembly in place supported by the base frame. Scaffolding directly in front of the two fork arms is temporary structure used for erection purposes only. Structure at this point of assembly is approximately 50 feet high.

known as the right ascension motion and the declination motion.

Referring to the accompanying sketch of the telescope, it will be noted that the axis of the polar axle, yoke and forks are aligned to the axis of the earth. This entire assembly will rotate about its polar axis and it will be supported by oil pads at the north and south support points of the base frame.

This rotational movement is called right ascension. Again referring to the sketch, it can be seen that the two outer ends, or prongs, of the forks support the tube assembly. This tube consists primarily of a mirror which is supported at its lower extremity by a pipe structure, and the prime focus cage which is similarly supported at the tube's upper extremity. The tube assembly moves about its two points of support at the fork ends. This motion is called the declination motion. By coordinating the two motions simultaneously, the astronomer will be able to track the movement of a star.

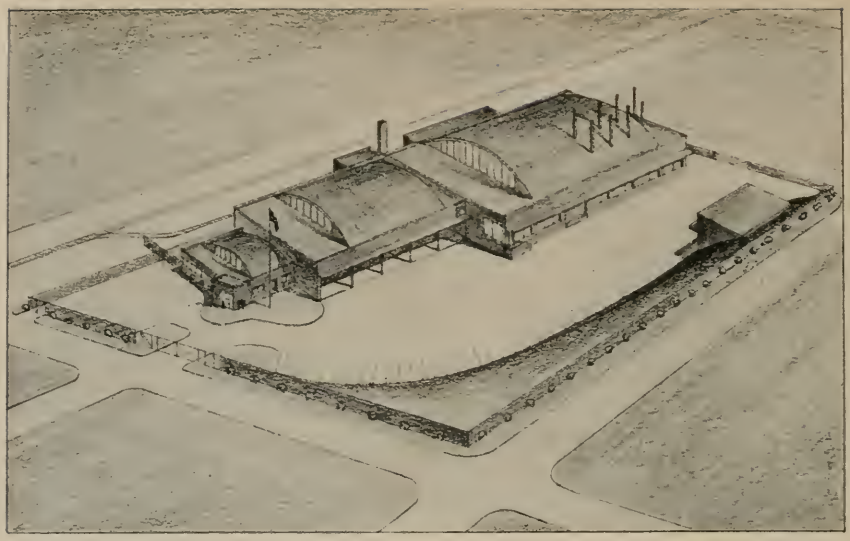
The right ascension motion is produced by the action of a worm gear and worm which are positioned on the south end of the polar axle. This gear is approximately 12 feet in diameter and weighs 6½ tons. It has machining accuracies which are above and beyond normal industrial practices. The precision of this gear must be such that no variation or eccentricities are introduced into the right ascension movement. In other words, movement must be so smooth that the reflected light on the photographic plate while the telescope is in motion tracking the star, cannot vary by more than two-thousandths of an inch. Should some eccentricity exist which would cause a greater variation than this, then a blurred image of the star would result on the photographic plate. This telescope will weigh approximately 140 tons and consists of a combination of large structural steel weldments and numerous machine assemblies. All of the structural steel weldments are highly machined and weigh, in some instances, as much as 30 tons apiece. The various machine assemblies are, for the most part, extremely intricate in design and require very close machining tolerances.

The Judson Pacific-Murphy Corporation, in fabri-

(See page 36)

Small Wooden Model of the 120-inch telescope which shows the relationship between the size of the telescope as compared to the Observatory itself.

Note that the circular dome of the Observatory has the ability to rotate, thus allowing the dome opening flexibility of movement.



POTATO CHIP

Processing Plant

PORTLAND, OREGON

ARCHITECT:
Morgan H. Hartford, A.I.A.

STRUCTURAL ENGINEER:
Leslie E. Poole

MECHANICAL ENGINEER
J. Donald Kroeker

ELECTRICAL ENGINEERS:
George Pettingel
Grant Kelley

The new processing plant of the Blue Bell Potato Chip Company, Gladys Sabin, president and Carl Dobler, general manager, is ideally located at N.E. Rodney and Farragut Streets in Portland, Oregon, and has been designed by Architect Hartford to provide this rapidly expanding firm with complete, modern facilities for the manufacture of potato chips and allied products.

Site clearance was necessary prior to start of the development which includes, in addition to the building construction, a project of site improvement that will include adequate off-street parking facilities for use of the company and its customers.

The new combination building contains approximately 60,000 sq. ft. of floor space area, and will provide modern facilities for executive and general administration offices; a spacious warehouse area for handling the firm's products; a completely up-to-date processing and manufacturing plant which will include latest equipment; and a truck repair department for service and maintenance of motor vehicle equipment.

Construction is of reinforced concrete with curved wood trusses and a built-up roof.

Architects—

POLICE YOUR PROFESSION

By ELMO K. LATHROP, AIA, AEI

Santa Fe, New Mexico

A talk by Mr. Ralph C. Kempton, Columbus, Ohio, urging architects to police their professions was of special interest to me; and these listed points raised by Mr. Kempton should be of interest to all practicing architects:

Though all states require a certificate to practice architecture, there are countless instances of violations by unqualified persons.

The practice of non-registered or unlicensed persons making vital decisions must be stopped.

Misleading firm names are quite common, as is the carrying of names of deceased members of firms.

The title, "Architects and Engineers," is misleading.

The taking into firms of accountants and attorneys should be discouraged.

Recommended investigation of all firm names which include the term, "Associates."

It is good to know that more and more architects are coming forward to state the facts about our profession and the weaknesses of our present architects' registration acts throughout the country.

I would like to point out that all of the items mentioned by Mr. Kempton were covered in the first 1951 draft of "Fair Practice Proposals"; and, after much consideration by committees, it was agreed that they should be retained in the revised 1953 printing of the proposals. This proposed EFFECTIVE AND UNIFORM LEGISLATION for all states will clarify these problems and many others which confront the practicing architect of today. If you have not received a copy of "Fair Practice Proposals," address your request to me and your copy will be forwarded to you.

In some states, it would be most difficult to "police your profession," as the existing architects' registration acts could be proven unconstitutional in a court of law. It should also be noted that in some states the registration acts include exceptions and exemptions which permit the non-registered to prepare plans and specifications for certain classifications of work which are rightfully the architect's. This sort of appeasement legislation should be abolished and covered by amendments.

"BAN ON STOCK PLANS FOR PRIVATE DWELLINGS?":

I regret that the resolution for stock plans was defeated at the convention, as it was concerned only

(See page 31)

WILL INSURANCE COVER YOUR LOSS?

In a strict interpretation of the word "Insurance," we doubt that a Surety Bond properly classifies as Insurance, but — to a layman — what's the difference what something is called, if somebody is ready to stand up and pay a sizable sum of money, occasioned by being unfortunate enough to have a Contractor default on construction of a dwelling or any other type of building.

It is a historical fact that Suretyship goes back to one of the oldest types of business protection, for we know that Solomon warned "he that is surety for a stranger shall smart for it" and "he is devoid of sense who becomes surety for another," and it is even mentioned by Shakespeare in his great "Merchant of Venice."

HENRY J. TRAINOR
Consultant, Miller & Ames, Insurance Brokers

The typical Surety underwriter of today is not a Solomon, but he must underwrite his Bonds by determining to his satisfaction that the Contractor has the ability to do a particular job, which means a Bonding Company must ascertain that the Contractor they are underwriting consistently and persistently complies with the spirit as well as the letter of his Contracts, and is one who has the reputation of handling transactions in all fairness and honesty. Thus we might say the first underwriting principle would be the Character of the Contractor.

After getting over that hurdle, it is necessary to be sure that the Contractor possesses the technical knowledge and experience to enable him to complete in a workmanlike and economical manner whatever type of job he undertakes. That we might call his Capacity.

Although last, certainly it is not least, the possession of enough cash and credit to meet commitments, plus adequate equipment and organization, is of course the big "C," meaning Capital.

Public Bodies have required Surety Bonds on Contracts for many years, in the protection of the taxpayers' money, since the Bond guarantees not only completion of the building, but, further, that the labor and material bills will be paid. On Public works, a lien does not lie; therefore, a Statutory Labor and Material Bond is required for the benefit of labor and material men. It is logical to assume that materials are expedited on the Bonded job, even perhaps to the extent that on Private work there could be a bit of favoritism by the Supplier on the type of work that is Bonded against the other type of work where he would have only the protection of filing a lien, for after all he can't pay his bills by showing liens on various jobs.

Architects realize the importance of bonding Private work, since the individual is generally operating on a more limited budget than Public Bodies. Failure of a Contractor to do his work at the original Contract price will frequently find the Owner unable to raise enough capital to finish a job which will go far beyond his original estimate.

Unless the Owner has the knowledge and the background of a Surety Company, he is then faced with doing his own underwriting. He may feel safe in taking a gamble that everything will come out all right, but there has always been one thought that struck us. The cost of a Surety Bond is generally less than it would cost to insure the life of the Contractor during the term of the Contract, but the Surety Bond is, in effect, a life insurance policy, because does it not say that the Contractor will do the work and pay the bills?—there is nothing in the Bond that says he has to be alive. We know of Sureties that have actually been involved in losses for the simple reason that the individual Contractor that signed the Contract, instead of starting the excavation on the following Wednesday, was being put in an excavation made for him in the cemetery.

EDITOR'S NOTE: The insurance brokerage firm of Miller & Ames, San Francisco, has for many years specialized in administration of insurance programs for all phases of the construction industry, and further explanation of any points raised in this series of articles will be gladly furnished upon request.

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WASHINGTON STATE CHAPTER

"I interviewed 23 Architects" was the topic of an address by Walter M. Casey of Mercer Island, Washington, at the September meeting held in the Sorrento Hotel, Seattle.

Casey supplemented his remarks with display of four questionnaires and a unique collection of observations about architects.

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SOUTHERN CALIFORNIA CHAPTER

"Architect-Builder Relationships" was the theme of a joint meeting with the Home Builders Institute on September 14 in the Starlight Room of the Hollywood Athletic Club.

A ten-minute surprise panel preceded the technical panel discussion which was participated in by architects and builders. Cornelius M. Deasy, architect and Director of the Chapter served as Moderator, while Edward Fickett, architect, and George Prussell of the Home Builders Institute prepared the program details. William Glenn Balch served as Program Chairman.

The second annual school construction conference, sponsored jointly by the Chapter and the Los Angeles Chamber of Commerce, Construction Industries Committee, was held in the Town and Gown on September 25. Last year the event was an outstanding success.

EAST BAY CHAPTER

"How to Let the Left Hand Know What the Right Hand is Doing—and Why" was the subject of a joint meeting of the Chapter and the Northern California Chapter and the Womens Architectural League on September 21 at the Hotel Claremont, Berkeley.

Following dinner, Don Hardison and Wendell Spackman moderated an open discussion by the com-

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Producers' Council—Southern California Chapter:
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Producers' Council—Northern California Chapter (See Special Page)

bined chapters on various problems and hopes that are interrelated to the two chapters.

NORTHERN CALIFORNIA CHAPTER

"Political Night," originally scheduled for September 21st, with a joint meeting of the East Bay Chapter, in the Palace Hotel, San Francisco, was indefinitely postponed.

Local California Legislative assemblymen and State Senators were to present and discuss legislative problems and the occasion was designed to become better acquainted with architects and the architectural profession.

PASADENA CHAPTER

A special showing of relaxing motion picture films highlighted the September meeting, held at Ken Gordon's, which is the annual get-together meeting following summer vacations.

New Member—George B. Carey is being welcomed as the newest member.

WAL EAST BAY

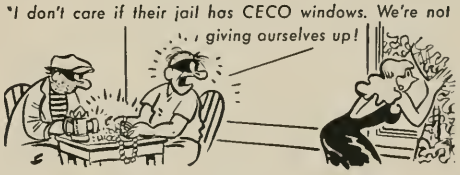
Hans Shaper, well known Illuminating Engineer, addressed the Women's Architectural League of the East Bay, at the College Women's Club on September 16.

Mrs. Winfield Hyde presided.

SAN DIEGO CHAPTER

The September meeting held in the Cafe Del Rey Moro, Balboa Park, House of Hospitality was devoted to a consideration of the subject "Aesthetics". Colored slides of contemporary architecture from all parts of the nation were shown. Tom Robertson, Director of the Fine Arts Gallery, served as Moderator of a panel discussion featuring George Lykos, Bob Mosier, Bruce Richards and Lloyd Ruocco.

"I don't care if their jail has CECO windows. We're not giving ourselves up!



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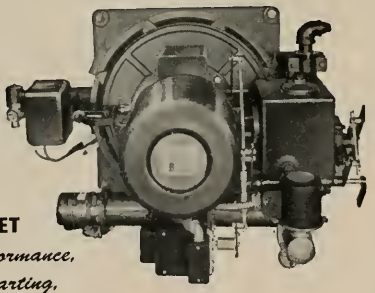
STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Convention committee reports indicate everything is in readiness for the annual SEAC Convention at the Hotel Del Coronado, Coronado, on October 14-15-16th.

A full schedule of business conferences will highlight many phases of the engineering profession with outstanding speakers from all parts of the nation scheduled to appear on the program.

Entertainment of delegates and guests will include a Luau, complete with Hawaiian music and Hula dancers; a trip to Tia Juana, Mexico, and an evening at the Jai Alai games; golf tournament and sail boat races deep sea fishing trip; sightseeing; and the Annual Banquet and entertainment on Saturday evening.

Special features have been planned by the SEAOSC Auxiliary for all wives of delegates, affording an excellent opportunity to get better acquainted.



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STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"Man With a Thousand Hands," was the subject of a technicolor film dealing with the Kitmat Plant of the Aluminum Company of Canada, Ltd., produced by the International Harvester Company, and shown at the regular September meeting. The film carried the project from the first view of the virgin territory to the completion of the plant.

New Members include: Thomas E. Jinney, Jr., Member; and Dean M. Carpenter, Affiliate.

SOCIETY OF AMERICAN MILITARY ENGINEERS—SAN FRANCISCO POST

Kendric B. Morrish, vice president of the American Trust Company and president of the Oakland Chamber of Commerce, addressed the September meeting on the subject: "Who's Right About Fish and Game". Morrish is well known for his articles on hunting and fishing written under the pen name of K. M. Bradford. He recently addressed the Commonwealth Club of California, weekly luncheon, on the same subject.

FEMINEERS

Victor Mott, personologist and famous fashion designer, spoke before the September meeting on the subject of "Fashion Design and the Use Of Color." A general group discussion followed Mr. Mott's talk. The meeting was a regular luncheon gathering in the Elks Club, San Francisco.

On Saturday, September 25, the FEMINEERS are hosting a "KICK-OFF" dance at the California Golf

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of
Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of
Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

Club, South San Francisco, to initiate the fall season. The affair will be a formal dinner-dance with music by a live orchestra. The committee in charge of the dance is made up of Mesdames E. W. Paddack, Chairman; Burr H. Randolph, Henry Degenkolb, and Jason Bloom.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

"Recent Developments on Prestressed Concrete in Europe and the United States," was the subject of a talk before the September meeting by Professor T. Y. Lin, Division of Civil Engineering, University of California at Berkeley. Prof. Lin described observations he had made during a year's residence in Europe. He visited many prestressed concrete structures and pretensioning factories and at the University of Gent in Belgium, conducted laboratory experiments on continuous prestressed concrete members subjected to repeated loadings.

New Members include: Richard C. Clark, George H. dela Vergne, Affiliates; Harold S. Dewdney, Norman B. Jones, and Wendell H. Wilson, Members; John W. Reagan, and Vernon A. Smoots, Associate; and Henry W. Smith, Allied.

AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco

Walter L. Huber, member, has been appointed by President Eisenhower to serve as Presidential Adviser for the Arkansas, White and Red River Basins Survey, an appointment without precedent in federal water resources planning history.

BUSINESS AND INDUSTRIAL PERSONNEL ENGINEERING MANAGEMENT COURSE

Advance plans for a 1955 Engineering and Management Course designed for business and industrial personnel, have been made by the College of Engineering and the School of Business Administration on the Los Angeles campus of the University of California.

The University Extension course, first of its kind to be offered on the Pacific Coast, will be held at the University from January 31 to February 11, 1955, with sessions meeting throughout each day. Presidents, vice-presidents, engineers, executives, managers, supervisors, foremen, industrial engineers, analysts, cost accountants, and other line and staff personnel, are invited to attend. Indications are that attendance will be recorded from several eastern cities, as well as Pacific Coast centers, according to Ralph M. Barnes, U. C. L. A. professor of engineering and business administration, who heads the planning committee.

The number of persons admitted to the course will be limited so that each person may have the maximum opportunity for individual participation and benefit. Advance registration is required, and registrations will be accepted in the order received. Inquiries about the course, information concerning living accommodations, and requests for enrollment should be addressed to Professor Edward P. Coleman, 4173E Engineering Building, University of California, Los Angeles 24, California.

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PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, Carl B. Frank, **Detroit Steel Products**, 921 Larkin Street
Vice-President, John C. Cowley, **The Brookman Co., Inc.**, 2833 Third Street
Secretary, John J. O'Connor, **H. H. Robertson Company**, 306 Sharon Bldg.
Treasurer, Phillip F. Brown, Jr., **Otis Elevator Company**, No. 1 Beach Street

Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

Ray J. Wickstrom, Regional Window Supervisor for Reynolds Metals Company, addressed a large group of members and guests of the San Francisco chapter of the Producers' Council on August 2, 1954, in the Comstock Room of San Francisco's Palace Hotel.

RAY J. WICKSTROM
Reynolds Metals Company

Mr. Wickstrom, who resides in Los Angeles and has been active in the metal window business for the past seventeen (17) years, outlined the expanding role which Reynolds Metals Company has played in the growth of the aluminum window industry since its fairly recent entry into this field in 1946.

Having started just in the residential casement field, the company now produces a broad line of window products including the following types: Casement, traverse sliding, awning, intermediate projected, double hung, basement, and utility.

Of particular interest to all present, was the Series #100 Window which is center pivoted vertically with hopper vents. This type of window is to be used throughout the new Equitable Life skyscraper building now under construction in downtown San Francisco.

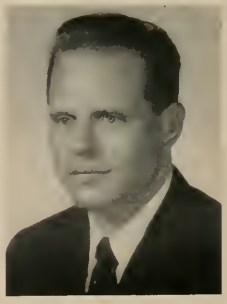
Mr. Wickstrom emphasized the advances in design and construction of the Reynolds' line of aluminum sash including alloys, satin finishes, flash welding, and many other features. The line meets, or exceeds, the engineering standards of the Aluminum Window Manufacturers' Association of which Reynolds is a leading member. In this regard, Mr. Wickstrom called attention to the tubular vent section of the "XW" size range of the Reynolds' casement series. This extra-strength feature insures adequate rigidity in the large vents so popular in the West.

While expanding into the commercial and monumental field, the Reynolds' line is still somewhat weighted in the residential field. Mr. Wickstrom's talk led up to the showing of a film titled, "Hurricane Tested," which dramatically showed the operation of Reynolds' newest offering in the window field—the leak proof, revolutionary traverse sliding window. The film included the actual tests of this window by the Housing Research Laboratory, University of Miami, under simulated hurricane conditions of wind and rain.

Samples and sections of the various products were on display.

II

The September meeting was held in the Athens Athletic Club in Oakland, California. Arcadia Metal Products was in charge of the program. A fifteen minute talk on the subject "Application of Sliding Glass Doors and Windows in Contemporary Building" was given by Lloyd O. Johnson, northern divisional sales manager for Arcadia metal products.



LLOYD O. JOHNSON
Arcadia Metal Products

In his talk Mr. Johnson paid tribute to the architects, both domestic and foreign, for their contributions to building specialty design, such as sliding glass doors and windows.

"The idea was not original here in the United States" stated Johnson, "but was probably first used in Japanese domestic architecture." A fifteen minute color sound film entitled "Doorways to Gracious Living" was shown after the talk. Many examples of good contemporary building design were shown in the picture. The display at the meeting included sections of all standard steel parts used in the manufacture of the

(See opposite page)

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

door. Andre Roegiers, sales representative, and Lloyd Johnson were on hand to discuss specific problems, and to demonstrate the latest in sliding doors.

III

Meeting note: The next meeting of the Producers Council will be held at the Palace Hotel, San Francisco on October 20.

Hal Reynolds, manager of the State Builders Exchange, Sacramento, will be guest speaker and will discuss the "Proposed State Bid Law." Mr. Reynolds will be moderator of the panel which will include the following persons: Cliff Dorwin, manager Oakland Builders Exchange; Frank Corker, manager San Francisco Builders Exchange; Leonard Tivol, A.I.A.; Fred Ashley, A.I.A.; J. A. Younger, A.G.C.; George Quamby, Detroit Steel Products; Al Waller, Truscon Steel; and William Smith, Ceco Steel.

This will be a most interesting program and everybody should attend.

POLICE YOUR PROFESSION

(From page 25)

with private dwellings. Perhaps this issue is contrary to the present objectives of The Institute, but these are changing times and the Institute may find it necessary to alter its objectives in order to keep pace with progress and best serve its members.

The use of stock plans for any type of building, other than the private dwelling, should never be approved, and I will continue to oppose stock plans for schools and other types of buildings. However, the small residence is another and very different problem. We should be realistic enough to realize that if the prospective owner—often of modest means—of a small home cannot obtain stock plans from the architect, he will most certainly resort to the drafting services operated by the unlicensed. Thus, we invite the non-registered to encroach and defeat the purpose of our registration acts, as well as deprive the architect of that which is justly his and which will add measurably to his livelihood. This is especially true of architects who specialize in tract developments and small houses. Also to be considered is the young architect struggling to build his practice. Stock plans would serve to carry him through those lean years.

It would seem to me that one of our responsibilities as architects is to give the public a complete architectural service on all projects, including the small residence, as well as to keep the cost of the plans within the client's budget. In a great many cases, this can only be accomplished by resorting to stock plans for the private dwelling. Through the process of stock plans, the architect can give the public better small homes and realize a greater profit from his services.

It is to be hoped that The Institute and those responsible for the defeat of this resolution will give the matter further consideration before taking any drastic action against a member of The Institute who may be operating a stock plan service. Let us not encourage action which can only detrimentally affect the livelihoods of members of The Institute, WHILE LEAVING ALL OTHERS FREE TO OPERATE AND COMPETE AS THEY SEE FIT.

"CONTRACTING IS A PROFESSION":

I was very glad to note that Rear Admiral J. R. Perry, Chief of the Bureau of Yards and Docks of the U. S. Navy, in a recent address titled, "The Contractor and the Contracting Officer," stated in part:

"You may or may not have noted that I referred to contracting as a 'profession.' I used the word, 'profession,' on purpose. Its use was an attempt on my part to summarize in one word the greatly enhanced position of the American Contractor . . . Construction is a profession in the true sense of that term . . ."

Long ago I realized that contracting was indeed a profession, and in 1951 drafted proposed effective and uniform legislation for all the allied building professions. The contractors were given equal status, as professional men, with the architects and engineers. These "Fair Practice Proposals" are still being highly publicized. There should no longer be any doubt that CONTRACTING IS A PROFESSION!

ARCHITECTS AND ENGINEERS DISPUTE EXTENT OF FIELDS:

The above statement was the caption for an ar-

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ticle which appeared recently in the Detroit News, from which the following is an excerpt:

"Overlap of interest in the architectural and engineering professions is recognized in the recent report of the Board of Directors of the American Institute of Architects.

"A friction between the two is found in several parts of the country and disputes have in some cases reached the courts. Architects claim that engineers are accepting commisisons on projects which they consider as strictly within the province of the architect to perform. Engineers are making similar claims against architects . . . there are many signs that those troubles are increasing in number and degree . . . courts have failed to find a solution . . . the Board recommended . . . an effort to establish mutually cooperative working conditions . . . to be jointly agreed upon . . . "

After reading this article, one might assume that this condition is a recent development, and one that can be solved by mutual agreement or an honor system. This thinking borders on the naive in our realistic world of great competition; and we have little time for such ineffectual meandering, as this cancerous condition has reached the stage of rapid growth.

The really practical solution to this pressing problem is effective and uniform legislation for all professions concerned, the theme of which should be complete collaboration between the architect and engineer on every project, with proper recognition for each. A format for this type of legislation is detailed in "Fair Practice Proposals," a program begun in 1951 which has been overwhelmingly approved by the members of both professions. It is to be hoped that the great majority of professional men, who have so faithfully supported this program and who believe "Fair Practice Proposals" is the solution to our problems, will now come forward and openly advocate this program.

NATIONAL DIRECTOR OF FAIR PRACTICE PROPOSALS:

After much deliberation, I have accepted the position of National Director of Fair Practice Proposals. This position is purely honorary, with no monetary compensation. I will continue to work, as I have in the past, for the successful completion of this program, which is effective and uniform legislation in each field of the allied building professions.

I wish to extend my sincere thanks to all for their fine support, and will hope for the same unselfish cooperation on the big job still to be done.

AMERICAN FILM DIRECTORS TO ADDRESS ART GROUP

Series Eleven of ART IN CINEMA'S film programs, at the San Francisco Museum of Art, will again present the directors, the creative men behind the American film, in a series devoted to "Aspects of the American Film—The Work of Fifteen Directors", and will bring to the Bay Area six of the most influential feature directors as guest speakers.

The six programs will be presented each Friday evening at 8 o'clock starting October 1. Scheduled to appear in person are: Gene Kelly, William Wellman, Merian C. Cooper, Joseph Maniewicz, Jean Negluesco, and Mack Sennett.

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

The self-employed professional engineers of the nation are victims of an 11th-hour decision by House-Senate conferees on the social security expansion bill, according to Clarence T. Shoch, president, National Society of Professional Engineers.

The head of the 33,000 member society of registered professional engineers criticized the action of the social security conferees in deciding to force self-employed professional engineers into the social security system, while leaving other major professions in an excluded status. The House bill provided mandatory coverage for all self-employed professionals, except doctors. The Senate version continued the present exclusion of all self-employed professionals.

The conference compromise provided mandatory coverage for self-employed professional engineers, architects and accountants, but continued the exclusion of lawyers, doctors, dentists and other professions allied with medicine.

"This arbitrary and discriminatory splitting of the professional groups is supported neither by logic or justice," Mr. Shoch said. "Why were professional engineers chosen in the group to be sacrificed? Every major engineering society which testified on the question was opposed to mandatory coverage for self-employed engineers."

The objection of the professional engineers to mandatory coverage rests primarily on the same ground as the opposition of the other professional groups—because the self-employed professional does not retire generally at the age of 65 and will not receive the retirement benefits after that age (until the age of 72) if he earns more than the small amount per year prescribed in the new bill ($1200 per year).

CALIFORNIA COUNCIL OF ARCHITECTS

Activities of the 1954 Annual Convention, Hoberg's Resort in Lake County, will start on September 29, and continue through October 2nd.

Vincent G. Raney, Chairman of the Program Committee, has arranged one of the best technical programs in the Council's history, and entertainment for delegates, their wives and guests, is complete, according to general convention manager F. Bourn Hayne.

Advance reservations point to a record attendance.

McNISH APPOINTED
HBI SECRETARY

Richard D. McNish has been appointed secretary of the Home Builders Institute, Los Angeles county-wide association of community developers.

He will assist George O. Prussell, executive vice-president, in promotion of affairs of the association.

HALL OF JUSTICE,
LODI

The architectural firm of Hurt, Trudell & Berger, San Francisco, are working on drawings for the construction of a new Hall of Justice for the City of Lodi, California.

A site has been acquired adjacent to the present city hall, and plans call for the construction of a 2-story, reinforced concrete and frame building at an estimated cost of $235,000.

$100,000
RESIDENCE

Architect Jack Buchter of Orinda is completing plans for the construction of a 1-story frame, shake roof residence to be constructed in Alamo (Contra Costa county) at an estimated cost of $100,000.

Plans include a swimming pool and stables in addition to the residence.

SCHOOL BONDS
APPROVED

Electors of the Alamitos School District of Garden Grove recently approved at a special election the issuance of $115,000 in school bonds and the acceptance of $950,000 State Loan to finance new school construction.

APPOINTED ON
NATIONAL BOARD

Charles Young, economist for the Weyerhaeuser Timber Company of Tacoma, Washington, and Robert J. Crabb of Larry Smith & Co. of Seattle, Washington, have been appointed members of a Committee on Business Statistics of the Chamber of Commerce of the United States.

The Committee, under the general chairmanship of Holman D. Pettibone, Chicago, will work for full restoration of regular censuses of manufacturers, minerals and business, and methods for making maximum use of this data.

ARCHITECTS
CHOSEN

The architectural firm of Harrison & Abramovitz of New York City have been selected by officials of the C.I.T. Financial Corpn to design a new building to be erected in New York City for the firm.

The new building will contain 36,000 ft. of ground space and 400,000 sq. ft. of office space.

NORTHERN CALIFORNIA
FEDERAL FUNDS

The Corps of Engineers, U. S. Army, San Francisco and Sacramento, recently announced allocation of funds for Army and Air Force facilities in the area with $785,000 going to the Oakland Army Base; $352,000 to the Benecia Arsenal; $1,000,000 to Hamilton Field Air Force Base and $7,772,000 going to the Travis Air Force Base near Fairfield.

At the same time the U. S. Navy Public Works office at San Bruno announced expenditures at the Alameda Naval Air Station of $4,463,000; Oakland Naval Supply Center, $3,051,000; Port Chicago Ammunition Depot, $519,000; San Francisco Navy Shipyard, $2,091,000; Moffett Field Naval Air Station, $1,336,000; and the Mare Island Naval Shipyard, $225,000.

NEW HIGH SCHOOL
FOR PASADENA

Architect A. C. Zimmerman, Howard A. Topp and Edgar F. Bircsak, associated architects of Los Angeles, and Boyd Georgi & Lee B. Kline, architects of Altadena, are preparing plans for construction of a new high school to be built in Pasadena for the Pasadena City School District.

Ropp & Ropp, Los Angeles, are the structural engineers, and Albert E. Byler, Los Angeles, is the structural engineer.

Estimated cost of the project is $4,000,000.

OFFICE BUILDING
FOR MODESTO

Architects Russell G. DeLappe and Mitchell Van Bourg of Berkeley are completing plans for the construction of a new 4-story reinforced concrete office building in the City of Modesto for the Modesto Irrigation District.

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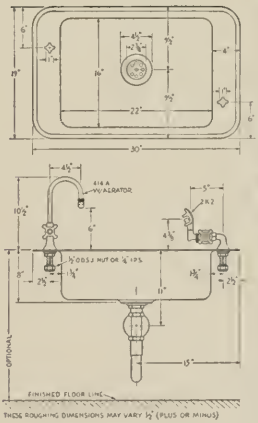

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PERSONALITIES

COL. PHILIP I. BAKER
Structural Engineer
Los Altos, California

Philip Baker's career as a structural engineer in the West and in other parts of this country and Canada was a full one when he went on active U. S. Army duty in 1940, where he served with the 11th Armored Division, under George S. Patton, as AA Battalion Commander and Division AA Officer during the Battle of the Bulge, and later as AA Group Commander. A number of engineering assignments included rehabilitation projects in Germany during the American occupation.

COL. PHILIP I. BAKER
Structural Engineer

He pioneered in the use on the West Coast of structural steel, all arc-welded construction. Outstanding was completion of the Western Freight Terminal in Los Angeles, 1932. Of the more than 200 buildings designed by Col. Baker in Southern California prior to 1933, none was damaged structurally in the Long Beach earthquake of that year. His theatres, bridges, schools, office buildings, factories and multi-story warehouses attest to an extremely active career.

Retired from the Army, Col. Baker is director of the Structural Division of consulting engineering firm of Carroll Bradberry & Associates of Los Altos, California. He is a member of the Structural Engineers Association and other professional organizations.

NEXT MONTH — Robert D. Dewell, Engineer, San Francisco.

ARCHITECTS Heart Home

(From page 12)

patients. In addition to the usual socio-economic information the questionnaire is first concerned with the **home,** room by room, to determine living patterns and preferences. The questions range from "Do you eat in the kitchen?" to "What noises do you find most objectionable?" "What method of glare control do you prefer?" "What wall surface textures do you like?" "Does easier cleaning justify elimination of (1) drapes (2) carpets, etc.?"

The questionnaire then covers the **place of work.** "Do you like to work in a large room with many workers or in small spaces with a few people?" "How about a large room with low partitions?" "Would you like some sculpture, murals, etc., where you work?"

Recreation: "Would you attend more social activities (theater, museum, zoo, etc.) if there were more elevators, fewer stairs, better heating, air conditioning, more convenient entrance and exit facilities?"

The results of the **transportation** section should be interesting: The patient is asked how far he can walk to transportation facilities. Then he's queried as to his most frequent complaints about mass transportation systems and asked what transportation he would prefer to use to get to various places.

All three of the internes are taking some questionnaires out themselves to get the "feel" of the replies. But most of their time will be spent thus: Patri will collate facts and preference data from the questionnaires. Collamer is gleaning information on time and motion studies and circulation, while Peterson is running down references on mechanical aids, from egg beaters to elevators (sample elevator data: Dean Wuerster has turned over to him a standard multi-level layout where closets are placed one above the other for future installation of elevators.)

This first summer of work was originally regarded as preliminary to the design project itself. But now, in the eyes of the architects involved, it has come to be the most important part of the whole plan. Don Hardison sums it up with "Getting this summer's research in tabular form to give us a set of standards for ways to make homes easier to live in, will fill a real need in every architect's office. An immense amount of work to this end has already been done, but the results have never been pulled together."

Inquiries on the project have been received from schools of architecture all over the country. Through the American Heart Association and the AIA copies of the questionnaire are going out to AIA chapters and Heart Associations in 45 states with a request for cooperation in gathering basic material. What started out as a project for three students may soon be enlisting the aid of hundreds of researchers in every section of the United States.

NEWS AND COMMENT ON ART

(From page 7)

is a group of exhibitions for use in elementary schools and include The Sea, Brush and Pigment, Animals, At Home, Story Telling, and a panel exhibition by Relf Case entitled Picture Making by Master Painters.

A full list of available Extension Exhibitions may be obtained from the Extension Department, War Memorial Building, San Francisco.

EXHIBIT OF NATURAL COLOR PHOTO MURALS

An exhibit of natural color photo murals, the larg-

est ever produced, will be shown in the Borgia Room of the St. Francis Hotel, San Francisco, Thursday and Friday, September 30 and October 1.

Latest development in dye transfer printing, making possible prints 40-inches by 60-inches and paneled color photo murals 5 feet by 10 feet from a single transparancy, will be demonstrated.

Seventy prints will be on exhibit including many "Translucencies", a new type print on vynol which gives an opalescent effect when viewed by back lighting but at the same time gives a highly reflective white backing under normal lighting conditions. Work of photographers Lyman Emerson, Paul Hesse, Charles Kerlee, and Dick Whittington is included.

DR. MORLEY ATTENDS ART CONFERENCE IN GREECE

Dr. Grace L. McCann Morley, director of the San Francisco Museum of Art and President of the American Association of Art Museum Directors, is serving as Director of the Unesco International Seminar on "The Role of Museums in Education" which is being held in Athens, Greece, September 12 to October 10.

The Seminar is a sequel to the one held in New York in 1952.

Dr. Morley plans a brief visit to Turkey, Lebanon and Egypt before returning to San Francisco.

AUSTRALIAN HOMES

(From page 15)

research and planning by Architect Bernard Evans—a $150,000 factory has been built in Warrigal Road, Moorabbin, a suburb of Melbourne.

A concrete mould has been cast for each of the two room-sizes, and around these are placed reinforced steel formwork to give a two-inch thickness to the wall to be poured. Before pouring, however, reinforcement is placed in position—six-inch mesh galvanized steel wire—and frame work for doors and windows set in position.

From a big hopper, the requisite amount of plaster is poured into a mixing bucket and mechanically mixed. The bucket is electrically hoisted over the aperture in the top of the mould, and plaster is poured. When it has set and cooled, the steel formwork is rolled back, and the plaster cell lifted off the central concrete mould.

A hot air generator capable of drying off four rooms in 24 hours has been installed to dry each cell completely before removal from factory. This is regarded as necessary because of the thickness of the plaster where the ceiling arches over from the walls—15" at its densest part.

Compression tests made by Australia's Commonwealth Scientific and Industrial Research Organization show the cells to be adequate in strength for the support of a normal tiled roof.

Further Aychar plans provide for the use of cells as ground floor of two-story constructions.

PICTURE CREDITS for this issue: Judson, Pacific-Murphy, Pages 21, 22 (top), 23; Hainlin Studio, Page 22 (bottom); Enterprise Electric Works, page 23 (bottom); Tom Burns, Jr., Cover, Page 16, 17, 18, 19, 20; Maurice Hodge, Page 24; H. L. Van Pelt, Page 8, 9, 10, 11; Commercial Studios, Page 12; Australian Official Photo, Page 13, 14, 15.

COURSES IN ELECTRONICS UC ENGINEERING EXTENSION

Two courses in Electronics are being offered by University of California Engineering Extension, Berkeley, as part of the fall electrical engineering program.

The course "Introduction to Electronics" will be taught by Ferdinand Voelker, electronics engineer at the University Radiation Laboratory, while the course "Industrial Electronics" will be conducted by Harold S. Robinson, engineer.

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120-INCH TELESCOPE

(From page 23)

cating this telescope, found itself faced with many technical problems. These went far beyond the normal demands of the structural steel industry. In many instances, they were obliged to call upon the individual and specialized skills of local industry. By combining skill and "know-how," these problems were finally resolved. Oakland Machine Works was the subcontractor in charge of all machinery for the telescope with one exception, and that was the fabrication of the right ascension gear and the declination gear. These huge, highly precisioned gears were made by Western Gear Works at Lynwood, California. Oakland Machine Works was further assisted by Humboldt Instrument Company of Oakland; Todd Shipyard of Alameda; Union Diesel Company and Lyco Machine Company of Oakland, and Bethlehem Pacific Coast Steel Corporation, Shipyard Division, San Francisco.

Many difficulties were encountered in transporting the large weldments to the job site. The 140 tons of welded structural steel and machine parts were shipped by truck over nineteen miles of narrow, winding, mountainous road to the top of Mount Hamilton where Lick Observatory has been in existence since 1877.

Erection is presently nearing completion and it is estimated that the telescope, which stands some eighty-four feet in the air, will be assembled and ready to receive the highly polished mirror sometime in the late months of 1954.

NOTE: Robert O. Valentine received his B.S. in Civil Engineering at the University of Santa Clara, and M.S. in Civil Engineering at Stanford University. He is an Associate Member, American Society of Civil Engineers: and project manager for the 120 inch Telescope project. Is also Project Engineer for the stiffening of the Golden Gate Bridge work being done by Judson Pacific-Murphy Corpn.

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ARCHITECTURAL FIRM ADDS SECOND STORY TO OFFICES

The architectural firm of Daniel, Mann, Johnson & Mendenhall, Los Angeles, is adding a complete second story to their present location at 4201 Sunset Blvd., which will provide another 4500 sq. ft. of office space. A steady increase in staff members during the past six months, highlighted by the addition of 30 technicians in July alone, necessitated the expansion, according to S. Kenneth Johnson, firm member.

GENERAL CONTRACTORS FORM NEW COUNCIL

Licensed general contractors in the southwest Los Angeles area have completed organization of the General Contractor's Council with election of the following officers: Bob Roos, Martin Roos Co., President; Robert Martin, vice-president, and Hugh Greenup of Hugh Greenup, Builder & Co., secretary and treasurer. Meetings will be held twice monthly.

ARCHITECTURAL OFFICES MOVE

Henry V. Chescoe, A.I.A. Architect, has moved his offices to larger facilities at 333 Kearny Street, San Francisco.

WILLIAM T. WRIGHT, Structural Engineer of Los Angeles, member of the California Board of Registration for Civil and Professional Engineers, was the principal speaker at the quarterly meeting of the Association of California Testing and Inspecting Laboratories, held in Santa Monica early this month.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

RESIDUAL STRESSES—In Metals and Metal Construction. By W. R. Osgood. Reinhold Publishing Corpn. 330 W. 42nd St., New York 36. Price $10.00.

This book has been prepared by the author, who is professor of Mechanics and Chairman of the Department, Illinois Institute of Technology, under the guidance of the Committee on Residual Stresses of the National Academy of Sciences, National Research Council, and describes and carefully evaluates the effects of residual stresses upon the performance of all kinds of structures. Particular emphasis is placed on the possible contributions of these stresses to fracture.

Twenty-two papers, contributed by specialists in the field from both here and abroad, offer an amazingly wide range of information on the origin, magnitude, and distribution of all types of residual stresses existing in a structure or a machine, whether arising from welding, machining, or other causes. Special summary covers many aspects of the residual stress problem, and includes several recommendations for future research and study.

Metallurgists, construction engineers, structural engineers, and architects will find the information contained in this volume of exceptional value.

HEATING, VENTILATING, AIR CONDITIONING GUIDE—1954. Vol. 32. American Society of Heating and Ventilating Engineers, 62 Worth St., New York 13. Price $10.00.

An instrument of service prepared for the profession and contains a Technical Data Section of reference material on the design and specification of heating, ventilating, and air conditioning systems based on the Transactions, the Investigations of the Research Laboratory and cooperating institutions and the Practice of the members and friends of the Society; a Manufacturers' Catalog Data Section containing essential and reliable information concerning Modern Equipment; and Complete Indexes to Technical and Catalog Data Sections.

1616 pages of valuable information.

GRAPHICS—In Engineering and Science. By A. S. Levens. John Wiley & Sons, Inc., 440 4th Ave., New York 16. Price $7.00.

The author is professor of Engineering Design at the University of California, Berkeley, and in this book presents a remarkable approach to graphics with two principal objectives; to help the reader gain a fuller appreciation of this vital mode of expression; and to enable him to use it in analyzing and solving problems in science and engineering. Clear explanations and carefully selected examples show the most effective combination of the elements of graphics in design, research, and development, and provide material for the integration of graphics with other topics such as mathematics, mechanics, strength of material, and design.

The book is divided into three parts: Part One provides a thorough grasp of the fundamentals of orthogonal projection; Part Two deals with recognized standards of graphical representation; and Part Three is concerned with graphical solutions and computations.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Grouting of heavy equipment. A 16-page folder describing successful grouting of heavy equipment with non-shrink mortar is available. It outlines and illustrates fully; some common methods of grouting different types of equipment, the mixing and placing of grout, cold and hot weather grouting, and other data; also information on recommended mixes and estimating tables plus many illustrations of actual installations. For free copy write DEPT-A&E, The Master Builders Co, Cleveland 3, Ohio.

Expanded plastics. New 24-page booklet describes a new foamable polystyrene which marks the newest advance in the field of expanded plastics; application of product to various

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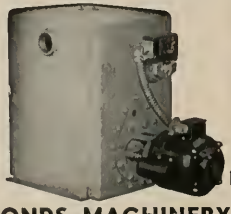

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CATALOGUES — Available

fields, including thermal insulation, toys, novelties and displays, buoyant members, sandwich construction, electronics, and packaging; also technical information with charts and diagrams in color, and photographs. Write for copy DEPT·A&E, Koppers Co, Inc, Chemical Division, Koppers Bldg., Pittsburgh 19, Pa.

Thermostatic temperature regulator. Just published, a 12-page catalog covering the Lawler type "S" thermostatic temperature regulator; explains where and when to use direct acting, reverse acting and three-way type thermostatic temperature regulators; lists typical engineering specifications; also explains where and how to use single and double seated valves; profusely illustrated with cutaway photos and diagrams, installation diagrams and engineering tables; also complete information on the whys and hows of temperature ranges, installation "musts," capacities and steam flows per hour. Write DEPT·A&E, Lawler Automatic Controls, Inc, 453 N. MacQuesten Parkway, Mt. Vernon, N. Y.

Suggested Ordinance on nursing homes. The National Board of Fire Underwriters has published a new edition of its "Suggested Ordinance on Nursing, Convalescent and Old Age Homes," bringing up-to-date a suggested ordinance for adoption by municipalities and a basis for state and county regulations. To obtain a free copy, write DEPT·A&E, National Board of Fire Underwriters, Engineering Dept, 85 John St, New York City 38.

Water hammer prevention. New engineering data booklet, in color, dealing with the cure and prevention of water hammer at the design level; has fold-out sizing procedure which enables any architect or engineer to size the Shokstop required to prevent any water hammer problem long before the building is erected. Gives data specifications for residential, school, commercial and industrial construction; single and multiple story. Write DEPT·A&E, Wade Mfg. Co, Elgin, Ill.

Requirements for masonry construction. American Standard A41.1 reviewed and revised by committee on Building Code Requirements and Good Practice Recommendations; covers specifications suitable for use in building codes, and applies to design as well as construction; also includes definitions, specifications for materials, allowable stresses and such miscellaneous requirements as those for the thickness of foundation walls, bonding of masonry walls, spacing, chases and recesses, protection against freezing, and bracing against lateral loads. For copy (.20) write DEPT·A&E, American Standards Association, 70 E. 45th St, New York 17.

Swimming pool pumps. A new bulletin describes and illustrates complete line of pumps for swimming pools; numerous photographs and diagrams are used to explain the pumps and their respective uses; types include, self-priming centrifugals and straight centrifugal, for private pools and for commercial pools. Anyone building swimming pools, installing pumps and filter systems or contemplating a pool for his own use will find this bulletin helpful. Copy by writing DEPT·A&E, Marlow Pumps, Division of Bell & Gossett Co, Ridgwood, New Jersey.

Flow control valves. New brochure gives technical data on low cost, accurate valves for almost any application where the control of water flow is required, or desired for conservation of water. Specifications for uses where pressure limitations are from 15 psi to 125 psi, and where water temperature is under 160 degrees f. Free copy. Write DEPT·A&E, The Dole Valve Co, 1933 Carroll Ave, Chicago 12, Ill.

Welding and cutting equipment. A new condensed 52-page catalog describing and illustrating Airco products regularly used by job shops, maintenance departments and other users of light welding and cutting equipment; covers gases, welding and cutting equipment and accessories, torches, tips, regulators, electrodes; designed to acquaint users with complete specifications and stock numbers. Write DEPT·A&E, General Products Catalog, Air Reduction Pacific Co, 220 Bush St, San Francisco.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$2.00 per sq. ft.
4 x 6 x 12 Partition	2.25 per sq. ft.
4 x 6 x 12 Double Faced Partition	3.00 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	3.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White — 1 to 100 sacks, $3.50 sack warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	.62	.62

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	13/16x2¼	½x2	⅜x2	Ax2
	$	$	$	$
Clear Otd., White	425	405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
13/16 x 2¼	390.00	381.00
13/16 x 2¾	375.00	355.00
13/16 x 3¼	395.00	375.00
13/16 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

13/16 x 2¼ First Grade	$390.00
13/16 x 2¼ 2nd Grade	365.00
13/16 x 2¼ 2nd & 3tr. Grade	375.00
13/16 x 2¼ 3rd Grade	240.00
13/16 x 3¼ 3rd & 3tr. Jtd. EM	380.00
13/16 x 3½ 2nd & 3tr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00
Floor Layer Wage $2.83 per hr.	

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/16 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/16 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/16 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/16 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3½") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MAR8LE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard	$ .75
Three-coat work	per yard	1.00
Cold water painting	per yard	25c
Whitewashing	per yard	15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless.
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16"..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red	$ .40	$ .36
12 x 12 x ⅞-inch, plain	.44	.39
6 x 12 x ⅞-inch, plain	.46	.42
6 x 6 x ⅞-inch, plain		

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 0126B
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co.,
924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co.,
625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co.,
109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co.,
300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co.,
19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

OFFICE BLDG., Albany, Alameda county.. Robert J. Foley and Richard Thomssen, Architect, owners. Two-story frame and stucco construction, $60,000. ARCHITECT: Young & Lloyd, Albany. GENERAL CONTRACTOR: Carl Overaa, Richmond.

WOODROW WILSON SCHOOL, Glendale, Los Angeles county. Glendale Unified School District, Glendale, owner. Junior High School plant, 2-story, poured concrete, 32-classroom-administration building; library and boiler room, auditorium with 1000 person capacity, cafeteria building with seating for 250 persons; shop and gymnasium building, boys and girls separate lockers, $1,993,990. ARCHITECT: Wm. Mellema, Los Angeles, and Erwood P. Eiden, Glendale. GENERAL CONTRACTOR: Robert E. McKee, Inc., West Los Angeles.

COMMUNITY HOSPITAL ADDN., Concord, Contra Costa county. Concord Community Hospital District, Concord, owner. Two-story wing addition, reinforced concrete construction, $274,000. ARCHITECT: Masten & Hurd, San Francisco. GENERAL CONTRACTOR: Four Companies, Danville.

MOTEL AND RESTAURANT, Phoenix, Arizona. Sands Hotel Inc., Las Vegas, owner. Two-story masonry construction, built-up roof, concrete and wood floors, gas heat, refrigerated air conditioning, plate glass, steel sash, terrazzo, steel roof trusses, insulation; 140-unit building, 457 x 227 ft. of area, $400,000. ARCHITECTS: Qvale-Ragnar & Associates, Los Angeles. GENERAL CONTRACTOR: M. D. Brown Enterprises, Inc., Phoenix.

FIRE HOUSE, Gilroy, Santa Clara county. County of Santa Clara, San Jose, owner. One-story concrete block and frame construction, $34,000. ENGINEER: W. J. Hanna & Sons, Gilroy. GENERAL CONTRACTOR: Wm. Radtke & Son, Gilroy.

OFFICE BLDG., Pacific Mutual, San Francisco. Pacific Mutual Life Insurance Co., Los Angeles, owner. Four-story, penthouse, basement, mezzanine; concrete block penthouse; "L" shaped building, reinforced concrete, aluminum windows, metal partitions, acoustical ceilings, asphalt tile floors, two elevators; 114 x 100 ft., $1,159,000. ARCHITECT: Loubet &

Glynn, San Francisco. GENERAL CONTRACTOR: MacDonald, Young & Nelson, San Francisco.

INSURANCE OFFICE BLDG., Middlefield Road, San Mateo county. Allstate Insurance Co., Menlo Park, owner. One-story addition to 1-story building, reinforced concrete, some structural steel, steel sash, 19,000 sq. ft., $220,889. ARCHITECT: Higgins & Root, San Jose. GENERAL CONTRACTOR: E. A. Hathaway Co., San Jose.

SUPER MARKET, Sharps Park, San Mateo county. Moore & O'Brien, Architect, owner. One-story, reinforced concrete tilt-up, structural steel, steel roof trusses with wood roof, $132,500. ARCHITECT: Hurt, Trudell & Berger, San Francisco. GENERAL CONTRACTOR: Stevenson-Pacific Co., Redwood City.

LIBRARY STACK EXPANSION, University of California, Davis, Yolo county. University of California, Davis, owner. Extension of facilities in the Library on the Davis campus, $207,639. ARCHITECT: Kitchen & Hunt, San Francisco. STRUCTURAL ENGINEER: H. J. Brunnier, San Francisco. MECHANICAL ENGINEER: Dan Vandement, San Francisco. GENERAL CONTRACTOR: Lawrence Const. Co., Sacramento.

UNION HALL (Carpenters), Hayward, Alameda county. Carpenters Local 1622, AFL, Hayward, owner. 1-story frame construction, 11,000 sq. ft. floor area—$91,332. ARCHITECT: Wahanaki & Corey, Associated, Hayward. GENERAL CONTRACTOR: A. J. Lindner, Oakland.

MACHINE SHOP, El Monte, Los Angeles county. Gregg Iron Foundry, El Monte, owner. 1-story galvanized corrugated iron roof, steel sash, rotary roof ventilators, concrete slab floor, double sliding

BUILDING TRADES WAGE (JOB SITES) NORTHERN, CENTRAL AND SOUTHERN CALIFORNIA

ATTENTION: The following are the PREVAILING hourly rates of compensation being paid and in effect by employers by agreement between employees and their union; or as recognized and determined by the U. S. Department of Labor. (Dec. 1, 1953.)

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKERS	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$3.05	$2.25	$2.25	$2.25	$2.25	$2.25
BOILERMAKERS	2.68	2.68	2.68	2.68	2.68	2.68	2.68	2.68					
BRICKLAYERS	3.40	3.45	3.45	3.40	3.40	3.40	3.40	3.40	3.175	3.175	3.175	3.175	3.175
BRICKLAYERS, HODCARRIERS	2.45	2.45	2.45	2.00	2.40	2.25	2.45	2.45	1.94	1.94	1.94	1.94	1.94
CARPENTERS	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
CEMENT FINISHERS	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.67	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.50	2.50	2.50	2.50	2.50
ELECTRICIANS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.10	3.10	3.10	3.10	3.10
ELEVATOR CONSTRUCTORS	2.75	2.70	2.65	2.75	2.915	2.915	2.915	2.915	2.25	2.25	2.25	2.25	2.25
ENGINEERS: MATERIAL HOIST	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	1.9875	1.9875	1.9875	1.9875	1.9875
GLAZIERS	2.55	2.55	2.55	2.55		2.53	2.53		2.395	2.395	2.395	2.395	2.395
IRONWORKERS: ORNAMENTAL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	3.00	3.00	3.00	3.00	3.00
REINF. STEEL	*2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.74	2.74	2.74	2.74	2.74
STRUCTURAL STEEL	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3 00	3.00	3.00	3.00	3.00	3.00
LABORERS: BUILDING	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
CONCRETE	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.05	2.05	2.05	2.05	2.05
LATHERS	3.35		3.35	3.35			3.35		3.175	3.175	3.175	3.175	3.175
MARBLE SETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875	2.875	2.875	2.875	2.875
MOSAIC & TERRAZZO	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.76	2.40	2.40	2.40	2.40	2.60
PAINTERS—BRUSH	**2.70	2.70	2.70	2.70	2.725	2.53	2.70	2.37	2.66	2.60	2.64	2.32	2.32
PAINTER—SPRAY					2.91	2.55			2.68				
PILEDRIVERS—OPERATOR	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.83	2.88	2.88	2.88	2.88	2.88
PLASTERERS	3.27	3.16S			3.00	3.00		3.00	3.125	3.125	3.125	3.125	3.125
PLASTERERS, HODCARRIERS	2.85				2.50	2.50		2.50	2.875	2.25	2.30	2.00	2.00
PLUMBERS—STEAM FITTERS	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
ROOFERS	2.75	2.75	2.75	2.50	2.75	2.75	2.75	2.75	2.65	2.00	1.90	2.00	2.00
SHEET METAL WORKERS	2.85	2.85	3.3125	2.43	2.75	2.50	2.40	2.415	2.625	2.625			2.625
SPRINKLER FITTERS	2.75	2.70	2.70	2.625	2.625	2.625	2.75	2.75	2.25	2.25	2.25	2.25	2.25
STEAMFITTERS	2.75	2.90	2.90	2.75	2.625	2.625	2.75	2.75	2.90	2.90	2.90	2.90	2.90
TRACTOR OPERATOR	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.77	2.65	2.65	2.65	2.65	2.65
TRUCK DRIVERS—½ Ton or less	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	2.13	2.13	2.13	2.13	2.13
TILESETTERS	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.65	2.65	2.65	2.65	2.65

* 6 Hour Day. ** 7 Hour Day. *** Before C.I.S.C for 15c increase.

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door, 40x80 feet of floor space—$8422. ENGINEER: F. E. MacDonald, Jr., San Gabriel. GENERAL CONTRACTOR: E. C. Livingston Co, Inc., Los Angeles.

OFFICE & WAREHOUSE, San Francisco. Foucar, Ray & Simon, San Francisco, owner. 1-story reinforced concrete, structural steel frame, asbestos protected metal exterior, aluminum entrance, steel sash, heavy concrete floor, concrete pile foundations, 50,000 sq. ft. floor area—$312,949. STRUCTURAL ENGINEER: Jesse Rosenwald, San Francisco. GENERAL CONTRACTOR: MacDonald, Young & Nelson, San Francisco.

ELEMENTARY SCHOOL, Downey, Los Angeles county. Old River School District, Downey, owner. New elementary school building, 7 classrooms and administration unit, frame and stucco construction, composition roofing, concrete slab and asphalt tile floors, acoustical tile, radiant heating, steel projected sash, ceramic tile work, metal toilet partitions, electrical work — $224,750. ARCHITECT: Jerome S. DeHetre, Compton. GENERAL CONTRACTOR: A. J. Marek, Montebello.

VETERANS MEMORIAL ELEMENTARY SCHOOL, Reno, Washoe county, Nevada. Reno Elementary School District No. 10, Reno, owner. Addition to existing building of 4 classrooms, concrete block and steel roof deck, acoustical ceilings, steel sash—$48,980. ARCHITECT: Russell Mills, Reno, Nevada. GENERAL CONTRACTOR: Walker Boudwin Const. Co, Reno.

OFFICE-WAREHOUSE, Los Angeles. Baker Steel & Tube Co., Los Angeles, owner. Concrete addition to office-warehouse with composition roofing, concrete slab, terrazzo and asphalt tile floors; interior plaster work, acoustic tile ceilings, arch wood trusses, precast concrete panels, insulation steel casement, electric drinking fountains, toilets, public address system, concrete vault, asphaltic concrete paving; 200x170 feet — $120,000. ENGINEER: Wm. M. Taggart, Los Angeles. ARCHITECT: Jack H. MacDonald, Beverly Hills. GENERAL CONTRACTOR: Jack H. MacDonald Co, Inc., Beverly Hills.

ADM. BLDG., TOLL-LANES, Richmond-Pt. San Quentin Bridge, Contra Costa county. State of California (Toll Bridge Authority) owner. 1-story reinforced concrete construction with basement, comprising facilities for toll bridge administration, maintenance, toll-lanes, and tunnel—$293,153. GENERAL CONTRACTOR: Williams & Burrows, Belmont.

ARMORY BUILDING, Quincy, Plumas county. State of California, Division of Architecture, owner. 1-story reinforced concrete, rigid steel frame, steel sash, wood roof with composition roofing, Type A, 11,000 sq. ft. floor area—$107,000. GENERAL CONTRACTOR: M. & K. Corpn, San Francisco.

HIGH SCHOOL SHOP, University High School, West Los Angeles. Los Angeles Board of Education, Los Angeles, owner. 1-story frame and stucco, plus alterations to existing building; L-shaped unit, 135x83 ft., composition roofing, mass and reinforced concrete, masonry work, cement finish, miscellaneous metal and structural steel, lath and plaster, ceramic tile, sheet metal, glass and glazing, acoustical materials, asphalt tile, wood floors, plumbing, heating and ventilating, ground improvements — $232,000. ARCHITECT: McFarland, Bonsall & Thomas, Los Angeles. GENERAL CONTRACTOR: Baruch Corpn, Los Angeles.

CONTROL TOWER, Mather Air Force Base, Sacramento county. Corps Engineers, U. S. Army, Sacramento, owner. Construction of control tower, beacon tower and extension of water, gas, sewer and power lines—$85,187. GENERAL CONTRACTOR: Howard S. Markwart, Sacramento.

COUNTY OFFICE BLDG., Sacramento. County of Sacramento, Sacramento, owner. 4-story and pent house, reinforced concrete, grouted brick, porcelain enamel, glass curtain walls, concrete pile foundations, lift-slab type construction, elevator(s), $1,346,221. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Stolte, Inc., San Leandro.

BOYS & GIRLS GYM, High School, Bakersfield, Kern county. Kern County Union High School District, Bakersfield, owner. Remodel and construct addition to existing structure; reinforced concrete construction, composition roof shingles, maple floor, steel sash, insulation, acoustical tile, ceramic tile, folding bleachers, $709,842. ARCHITECT: C. B. Alford & W. J. Thomas, Bakersfield. GENERAL CONTRACTOR: Guy E. Hall, Bakersfield.

MEN'S RESIDENCE HALL, Stanford University, Santa Clara county. Stanford University Board of Trustees, Palo Alto, owner. Comprises eight 3-story dormitories, one administration building, kitchen, dining room, concrete corridors, lounges, reinforced concrete construction, tile roof, $2,689,907. ARCHITECT: Spencer & Ambrose, San Francisco. GENERAL CONTRACTOR: Wells P. Goodenough, Palo Alto.

NORTH OCEANSIDE SCHOOL, Oceanside, San Diego county. Oceanside-Libby Union School District, Oceanside, owner. 1 story frame and stucco elementary school in North Oceanside; 4 classrooms, multi-purpose building, kitchen, kindergarten; composition gravel roof, concrete floor, asphalt tile, painting, plastering, heating and ventilating, reinforcing steel, steel sash, fencing and grading, $144,269. ARCHITECT: Sam Hamill, San Diego. GENERAL CONTRACTOR: Chamco Const. Co, San Diego.

GRAIN WAREHOUSE, Port of Stockton, San Joaquin county. Pacific International Rice Mills, Inc., San Francisco, owner. 1 story reinforced tilt-up concrete and structural steel construction, steel roof trusses and corrugated steel roof, grain handling equipment, 120x260 ft., $250,000. GENERAL CONTRACTOR: Utah Const. Co, San Francisco.

WAREHOUSE, State Printing Office, Sacramento. State of California, Sacramento, owner. 1 story prestressed beams and purlins, precast concrete columns, concrete loading deck, ribbed steel roof deck, block wall partitions, plumbing, heating, lighting; 41,000 sq. ft., $257,000. ARCHITECT: State of California. GENERAL CONTRACTOR: Lawrence Const. Co, and Continental Const. Co, (J-V), Sacramento.

EL SOBRANTE ELEMENTARY SCHOOL, El Sobrante, Contra Costa county. Pinole Elementary School District, Pinole, owner. Second addition to school, 9 class rooms, kindergarten, kitchen, library, multi-purpose room, toilets; frame and stucco construction, $284,888. ARCHITECT: Jack Buchter, Orinda. GENERAL CONTRACTOR: Calif. Builder Co, Oakland.

OFFICE BLDG. ADDN., Union Oil offices, San Francisco. Union Oil Company of California, San Francisco, owner. 3-story structural steel frame, reinforced concrete walls, ceramic veneer exterior, structural steel tower with porcelain enamel facing, $400,000. ARCHITECT: Ralph N. Kerr, Oakland. GENERAL CONTRACTOR: Engineers, Ltd, San Francisco.

LARCHMONT ELEMENTARY SCHOOL, Rio Linda, Sacramento county. Rio Linda Elementary School District, Rio Linda, owner. New school structure consisting of 7 class rooms, 2 kindergartens, kitchen, multi-purpose facilities, toilets, $289,489. ARCHITECT: Sellon & Cox, Sacramento. GENERAL CONTRACTOR: Lawrence Const. Co, Sacramento.

ELECTRON TUBE LABORATORY, near Stanford University, Santa Clara county. Stanford University, Palo Alto, owner. 1-story wood and steel frame, reinforced concrete tilt-up walls, steel sash, faced brick front, 10,000 sq. ft. floor area. ARCHITECT: John Carl Warnecke, San Francisco. GENERAL CONTRACTOR: Haas & Haynie, San Francisco.

DEL PASO HEIGHTS, Jr. High School addn., Sacramento county. Grant Union High School District, Del Paso Heights, owner. Frame and stucco construction of 7 classrooms, $132,016. ARCHITECT: Leonard F. Starks, Sacramento. GENERAL CONTRACTOR: Edwin J. Mackey, Sacramento.

BAYVIEW ELEMENTARY SCHOOL, East Palo Alto, San Mateo county. Ravenswood Elementary School District, Palo Alto, owner. Frame and stucco, concrete floors with asphalt tile, radiant heating and forced air heating, steel sash, skylights; administration offices, 12 class rooms, 2 kindergartens, toilet rooms.

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$254,923. ARCHITECT: Peter Kump, Menlo Park. GENERAL CONTRACTOR: N. A. Lamb, Campbell.

CLAY PLANT, Ione, Amador county. Gladding, McBean & Co., San Francisco, owner. Construction of plant including structural steel, steel and aluminum exterior, conveyor system, rotary kiln and cooler, $750,000. GENERAL CONTRACTOR: Payne Const. Co, Oakland.

RESTAURANT, near Bakersfield, Kern county. Mrs. Gilbert Arkelian, Bakersfield, owner. 1 story, concrete slab floor, forced air heating, insulation, plastering, plate glass, steel roof trusses, electrical, plumbing. ARCHITECT: Whitney Biggar, Bakersfield. GENERAL CONTRACTOR: David M. Biggar, Bakersfield.

IN THE NEWS

SCREEN GUILD HEADQUARTERS

Architect Arthur Froelich of Beverly Hills and Architect Randall Duell of West Los Angeles are completing plans for the construction of a type III-B headquarters building and theater in West Hollywood for the Screen Director's Guild of America, Inc.

The building, costing an estimated $300,000, will contain offices, library, theater and stage.

ARCHITECT SELECTED

The architectural firm of Corrough & Wong of San Francisco has been commissioned by the Jamestown Elementary School District board of trustees to design and prepare plans for the construction of an addition to the Elementary School at Jamestown, Tuolumne county.

BANK SITE PURCHASED

The San Francisco Bank, Oakland, has purchased a site for the construction of a new bank building in Irvington, Alameda county. Estimated cost of the building is $100,000.

SCHOOL BONDS APPROVED

Voters of the Covina Elementary School District recently approved at a special election the issuance of $1,000,000 in school bonds, in order to accept $5,000,000 in State Aid. Funds to be used for the construction of new schools and improvements to present facilities.

RESEARCH LABORATORY

The Richfield Oil Company, Los Angeles, announces the construction of a new research laboratory on a 20-acre site in Anaheim. The project will include administration building, main laboratory, fuel testing laboratory, library, shop and storage building, pilot plant and fuel storage tanks.

Estimated cost of the work is $3,000,000.

GOLDEN GATE BRIDGE SERVICE BUILDING

Directors of the Golden Gate Bridge and Highway District, San Francisco, will construct a 1-story, structural steel, concrete block wall and lightweight concrete roof, service building at the Toll Plaza at an estimated cost of $120,000.

The new building will contain facilities of garage, warehouse and machine shop.

COLLEGE STADIUM

Architects Richard Neutra and Robert Alexander of Los Angeles are preparing plans for a stadium to be built for the Orange Coast College District in Costa Mesa, San Diego county.

The stadium will seat 7400 and will be of earth fill and concrete construction. A field house, erected as part of the project, will be of frame construction. Lighting systems, plumbing, and paving work are included.

HOUSING PROJECT SHOPPING CENTER

The Del E. Webb Construction Company of Los Angeles have acquired a 2000 acre tract of land 5 miles north of Denver, Colorado, and will soon start the construction of a development project which will include facilities for housing 20,000 people and a shopping center to serve the new community.

Estimated cost of the project is $100,000,000.

RESIDENTIAL DEVELOPMENT

Plans have been announced by the Oliver Rousseau Construction Co. of Hayward for the construction of a group of 1,200 homes and a shopping center near Hayward in Alameda county.

The shopping center will represent an expenditure of approximately $1,000,000 and the residences will cost $8,000 each to construct.

NEW BANK FOR FRESNO

The Bank of America will build a new 2-story, with mezzanine, bank building in Fresno to be known as the Manchester Park Branch.

Containing 60 x 148 feet, the building will be of reinforced concrete and will cost an estimated $200,000.

NEW CATHOLIC HIGH SCHOOL

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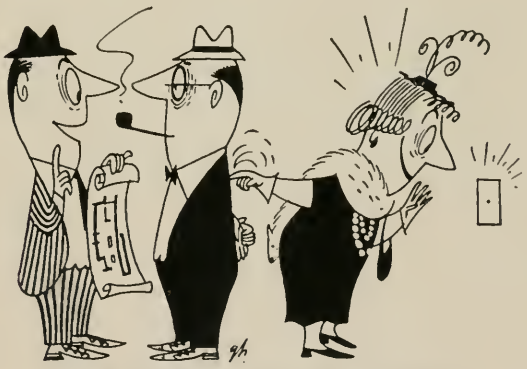

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San Francisco recently announced the construction of a new frame and stucco High School building to be built in Stockton. The building will include a gymnasium and administrative facilities and will cost an estimated $1,500,000.

J. Clarence Felciano, architect of Santa Rosa, is preparing plans.

BURLINGAME PLAZA
SHOPPING CENTER

The Atlantic Life Insurance Company announced plans for the construction of a Shopping Center in Burlingame near the Peninsula Hospital property.

Robert B. Liles of San Francisco is the architect preparing preliminary plans for construction which will cost an estimated $1,500,000.

BRANCH
Y.M.C.A.

Plans are being prepared by architects Wulff and Field of San Diego, for the construction of a Northeast Branch of the Y.M.C.A. in San Diego in for the Metropolitan YMCA.

The new building will contain a swimming pool, 2 handball courts, locker rooms, lounge, lobby, kitchen and administration offices. Estimated cost is $385,000.

OFFICE
BUILDING

The Union Oil Company of California has purchased a city block bounded by 5th, Maryland, Bixed and Boylston, in Los Angeles, and will construct a height-limit office building as its new headquarters.

The property covers 200,000 sq. ft.

Architects Periera and Luckman, Los Angeles, have been commissioned to prepare plans for the building.

PLUMBING BUREAU
35TH ANNIVERSARY

Organized in 1919 as the National Trade Extension Bureau of the Plumbing and Heating Industries, its present-day successor, the Plumbing and Heating Industries Bureau, will observe its 35th anniversary at the annual meeting to be held in Chicago, October 14.

The Bureau's work is carried on under the sponsorship of many national and sectional associations of manufacturers, wholesalers, and contractors.

Among those participating in the original organization of the Bureau were: Frank H. Meadows of Denver; and Francis J. Baker and Alexander Coleman of San Francisco.

ADAMS JOINS
DURAND DOORS

C. Donald Adams has been appointed Sales Manager of the Durand Metal Door Company of Los Angeles, according to an announcement by Gil Durand.

Schooled in architecture, Adams is well acquainted with the construction industry, having served as sales engineer, estimating, quantity surveys, sales and engineering, and promotion work for a number of firms.

UKIAH PLANS
HOSPITAL

The architectural firm of Stone & Malloy and S. P. Marraccini of San Francisco is completing plans for the construction of a Mendocino County Hospital building in Ukiah.

The building will provide 82 beds and all service facilities; will be of 1-story frame and stucco construction.

NEW GYMNASIUM
GLENDALE COLLEGE

Architects George M. Lindsey and Robert M. Lindsey & Associates, Los Angeles, have completed plans for construction of a reinforced concrete men's gymnasium building at Glendale College, Glendale.

The building will contain 33,000 sq. ft.; wood roof framing, composition gravel roof, steel trusses and beams, concrete slab floors with maple spring flooring in gymnasium section and all necessary facilities. Estimated cost is $500,000.

STATLER YOUTH CENTER
FOR CITY OF PERRIS

Architect Bolton Caldwell Moise, Jr., of Riverside, is completing drawings for construction of a 1-story reinforced masonry recreation building near the Public Park in Perris.

To be known as the "Statler Youth Center," it will contain 2500 sq. ft. of floor area, composition gravel roof, steel sash, forced air heating, slab floors, barbecue, library and fixtures, outdoor play area, toilets, and concrete walks and approaches.

COUNTY LIBRARY
BUILDING

The architectural firm of Swartz & Hyberg of Fresno is working on plans for construction of a new Fresno County Li-

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brary building to be built as part of the city's new Civic Center project.

The building will be 2-story, with basement, reinforced concrete construction and will comprise 76,360 sq. ft. of floor area. Estimated cost is $1,550,000.

SANTA MONICA MEMORIAL CLOCK TOWER

Architects Barienbrock & Murray of Santa Monica are preparing drawings for construction of a 60-foot concrete block tower to be erected on a site at the Santa Monica City College. The tower will be in the form of a Memorial.

RECREATION CENTER LAS VEGAS

Architect J. Maher Weller of Las Vegas, Nevada, has designed a new gymnasium building to be constructed at the Westside Recreation Park in Las Vegas for the City of Las Vegas.

The new building is the first phase of a recreation center for the Park.

BURLINGAME CHURCH

Architect Alfred W. Johnson, San Francisco, has completed design of an addition to the First Presbyterian Church in Burlingame.

The remodeling will be of frame and stucco construction, with some veneer, and will cost an estimated $250,000.

FLOAT BUILDING FOR ROSE TOURNAMENT

Architects Smith & Williams, Pasadena, are completing drawings for construction of a 26,600 sq. ft. concrete block Tournament of Roses float building. The building to be used for the construction of floats will have 129 ft. clear span truss roof, concrete slab floor, toilets and other facilities.

John Manasian, Pasadena, is the Structural Engineer, and J. F. Reardon & Associates, Reseda, are the mechanical and electrical engineers.

FELLOWSHIP HALL AND CHURCH

Architect William D. Conolino and George L. Willes of Monterey are completing drawings for the construction of a combination Church, Office, and Fellowship Hall for the Church of The Wayfarer of Carmel.

The building will contain 7,500 sq. ft. of floor space and will be of 2-story design—the 1st floor reinforced concrete and the 2nd floor frame and stucco.

BAKERSFIELD NEW HEALTH CENTER

Architect Robert N. Eddy, Bakersfield, is preparing preliminary plans for construction of a health center in the City of Bakersfield for the Kern County Board of Supervisors.

Work included remodeling and new construction at an estimated cost of $422,000.

ADDITIONS TO HAWTHORNE SCHOOL

Architect Russell Mills, Reno, Nevada, is completing plans for construction of a $140,000 classroom, commercial room and homemaking addition to the High School at Hawthorne, Nevada; and a $125,000 addition to the Hawthorne Elementary School which includes classrooms and a new cafeteria.

UNIVERSITY CALIFORNIA MEDICAL SCIENCE BLDG.

Architects Blanchard & Meher, San Francisco, are working on plans for construction of a 14-story structural steel frame and reinforced concrete building for the Board of Regents of the University of California.

The structure will be an addition to the Medical Sciences Building at 3rd and Parnassus in San Francisco.

REDWOOD EMPIRE HIGH SCHOOL

Members of the Southern Humboldt Unified School District Board recently started work on construction of a new High School to be known as the South Fork High School and to be built in the town of Miranda.

Architect Ernest F. Winkler, San Francisco, is preparing drawings which will in-

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clude classrooms, administration facilities, gymnasium, shower and locker rooms, toilets and a shop.

Construction will be light steel frame and frame and stucco, asphalt tile floors over concrete base. Estimated cost is $750,000.

ARCHITECT SELECTED

The Vallejo Unified School District has commissioned the architectural firm of Buchter & Lillis of Vallejo to develop plans for moving and remodeling of the Carquinez Heights School to a new site on Magazine Street. Both exterior and interior are to be remodeled.

PASO ROBLES CITY HALL

The City of Paso Robles is in the process of constructing a new City Hall with plans being drawn by Architect Wm. D. Holdredge of San Luis Obispo.

The proposed new municipal building will be of 1-story reinforced brick and frame construction, and will cost an estimated $75,000.

CANDY FACTORY SITE ACQUIRED

The Sees Candy Company of San Francisco has acquired a site on El Camino Real and Spruce Avenue in South San Francisco where they will construct a new candy factory in the future, according to company officials.

The new factory will represent an expenditure of approximately $1,000,000.

GENERAL ELECTRIC NEW LABORATORY

The General Electric Company will establish a new electron tube development laboratory in an ultra-modern structure to be built on Stanford University land near Palo Alto in the immediate future, according to an announcement by Dr. W. R. G. Baker, G-E Vice-President, and Dr. Wallace Sterling, Stanford president.

H. R. Oldfield, Jr. has been named manager of the new laboratory, which comprises a 10,000 sq. ft. plant.

PALO ALTO CHURCH

Architect Leslie I. Nichols, Palo Alto, is working on plans for the construction of the First Presbyterian Church, Sunday School and social hall, which will be built in Palo Alto at an estimated cost of $250,000.

The building will be 1-story, frame and shake roof with some masonry construction.

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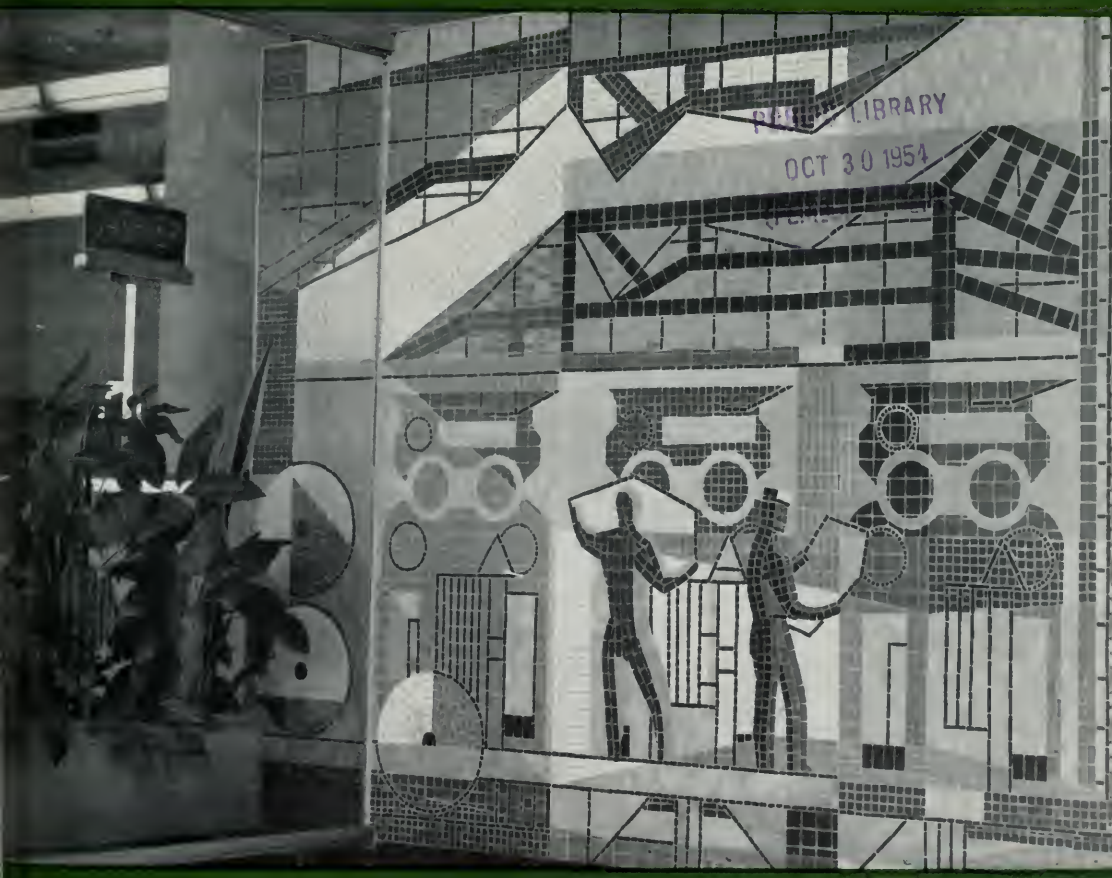
MOSAIC TILE LOBBY . . . Stockton Record Building



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DONALD G CLEVER, Artist

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At the Daves Avenue School in Los Gatos, California, a Crossing Guard Protects the Children . . .

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Like other communities, Los Gatos, California, is in an area where both subterranean and dry wood (flying) termites exist. Schools and other public buildings have been attacked by these insects. For extermination, authorities have had to resort to periodic expensive fumigations—at an average cost of $150 per room. And fumigation does not protect the structure from a reappearance of the termites.

Faced with this problem in designing the new Daves Avenue School, the architectural firm of Evans & Lincoln, San Jose, California, evolved the solution of using pressure treated termite and decay resistant lumber throughout.

After a study of available wood preservatives, Mr. Evans specified that all lumber was to be pressure treated with Chemonite. This salt-type wood preservative leaves lumber clean, paintable, non-oily and odorless. It will resist all attacks by termites or rot organisms for the life of the building.

The cost for protecting the entire school structure with BAXCO Chemonited Lumber was about one and one-half times more than the cost of one fumigation, according to Mr. Evans. But since fumigations may be required every few years, the use of Chemonited (chemically preserved) wood will prove an economy in future years through lower annual maintenance costs.

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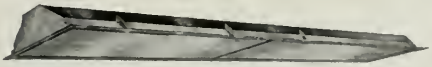

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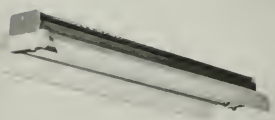

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COVER PICTURE

COLORFUL
MOSAIC-TILE
LOBBY

Section of a 21' x 7' mosaic in the entrance of the remodeled Stockton Daily Record building.

The theme depicts a huge modern newspaper printing press in operation.

Artist Donald G. Clever, and assistants, created the mosaic with unglazed ceramic tile manufactured by Mosaic Tile Company and Olean Tile Co., the latter being distributed by Gladding, McBean & Company.

Clarence Mayhew, A.I.A., was the architect.

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LET'S SELL IDEAS

The American businessman is the world's master when it comes to the art of advertising and selling his wares to the public, but how about the professional man?

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Our national administration is extremely charitable towards recognition of "professions" and for the first time in decades professional people have an opportunity to develop a great national hero, a human type, a salesman of himself and of your professional viewpoint.

How will this be done? Only you as a member of your profession have the answer; however, it is doubtful if successful selling of ideas can be accomplished by legislation or competition in business and commercial activities outside the scope of your profession.

* * *

All the Constitution guarantees is "the pursuit of happiness"—you have to catch up with it yourself.

* * *

SELECTING AN ARCHITECT

School Boards, city and county officials, governing boards of quasi-municipal districts, fraternal and religious institutions and the private individual eventually are faced with the problem of selecting an architect to design a new, or design improvements to, a building.

Selection of an architect is an important and often a difficult undertaking as many factors are included in the design, above and beyond the utility use of the structure contemplated. The problem usually includes meeting the needs of the present and providing for the needs of the future. Construction must be structurally sound and materials and workmanship such that the completed building represents economy of operation and maintenance, as well as a maximum of designed use.

These factors, essential in any construction, do not just happen. They require the highest quality of creative ability, a tremendous amount of know-how, infinite patience, and a knowledge of working with others to accomplish a common goal.

In selecting an architect then, the primary requisite should be ability to perform and produce the desired building. Such a consideration may not be found in influential friends, political pressure, reduced fees, but is found in education plus practical experience and basic principles of high character and honesty.

* * *

"We can have a democratic Asia, if we want it, for a half a billion dollars," says Justice William Douglas. If this were right it would be quite a bargain, considering our $50 billion defense program.

* * *

ONE ARCHITECT'S OPINION

Architect William Arild Johnson, A.I.A., of Seattle, Washington, who has an enviable record of designing some one hundred and thirty-one schools to his credit, and must therefore be considered as somewhat of an authority on the subject of school house design and construction, believes that astute local school boards throughout the United States can save taxpayers $3,000,000,000 or more in the next seven years by the use of mental freeways through the old-time notions, methods, and styles of school house construction.

The Federal Office of Education, following a very thorough study of the needs of school facilities, has estimated that the school building jobs necessary to the nation in the coming years up to 1960 will amount to $25,000,000,000 for construction alone. No less than seven hundred and seventy thousand classrooms must be provided in that period.

Architect Johnson is quoted in a national trade association publication, as saying that the best school for the dollar can be had by means of modern engineering, with ready-made trusses and pre-trimmed lumber delivered on the site.

Architect Johnson's one hundred and thirty-first school is the recently completed Lynwood, Washington, Junior High School, which opened this fall for classes. Designed for one-thousand two-hundred pupils, it was built for $1,200,000. Actual construction cost was only $8.02 per square foot. Equipment, taxes and fees brought the total square-foot cost up to no more than $10.85.

A comparison of these cost figures is indeed news on how it is possible to save in school house construction cost by adopting today's modern methods, materials, and architectural design.

COLORFUL CLAY BRICK . . .

creative architecture make Eastman at Stanford color plant a masterpiece

Photo by Pirkle Jones

In creating the atmosphere of artistry and quality befitting the Eastman Color Processing Laboratory adjoining Stanford University, Architect John Bolles A.I.A. has utilized the flexibility and adaptability of Clay Brick in expression of decorative design as well as in attaining sound functional construction. Another example of how "Ideas Click with Clay Brick!"

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NEWS and COMMENT ON ART

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has announced a special group of exhibitions and events for October, which includes the following:

EXHIBITIONS—Rental Gallery special showing; Primitivism and Modern Art; Gio Ponti and Georgy Pekes: an exhibition of the work of two distinguished designers; Paintings by Southern California artists; 18th Annual Watercolor Exhibition of the San Francisco Art Association; and Paintings by Per Krog, a retrospective loan exhibition under the patronage of the Embassy of Norway, Washington, D. C.

SPECIAL EVENTS — Special Lecture-Tours are conducted each Sunday afternoon at 3 o'clock; Discussions on Art, Wednesday evenings at 8 o'clock; Art in Cinema, Series II, "aspects of the American Film, featuring the work of 15 directors," Friday evenings; and Classes in Art for the Layman, Tuesdays at 10 a.m.; Sketch Club, Fridays at 7:30 p.m.; Painting Class, Fridays at 7:30 p.m.; and the Children's Class on Saturday mornings at 10 o'clock.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, is featuring an Exhibition of Oils by Letizia Cerio and Carl Morris; Watercolors, by Rollin Pickford, and the Pictures of the Month in the Little Gallery are a group of Colored Drawings, by Hanna Nagel.

WATERCOLOR EXHIBITION AWARDS ANNOUNCED

Prize awards of the 18th Annual Watercolor Exhibition of the San Francisco Art Association, being shown at the San Francisco Museum of Art, War Memorial Building, as announced by the Award Jury included the following artists:

First Prize, the San Francisco Art Association Purchase Prize of $100, went to David Kasmire of Vallejo, California, for his work "View of Vallejo;" the $75 Artist Council Prize, open only to artist members of the San Francisco Art Association, was awarded to Fred Reichman of San Francisco for his work "Spain;" the $75 Artists Council Prize went to Robert Collins of Minneapolis, Minn., for his work, "Diners;" and the $50 San Francisco Art Association award went to Robert Sterling of San Francisco, for his work, "Water Form."

Jean Cushman, San Francisco, J. de Feo, Charles Gill, Berkeley, and Matt Kahn of Menlo Park, received "honorable mention" awards.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, offers a number of outstanding exhibitions and events for this month, including the following:

EXHIBITIONS: The 15th Annual Exhibition of the Society of Western Artists, featuring work in oils, watercolors and sculpture; Carl Bodmer Paints of the Indian Frontier—1833 to 1834, an exhibition of watercolors and drawings from the collection of Prince Karl Viktor zu Wied; Four Flemish Gothic Tapestries—The Divinity, The Fall and the Beginning of the Redemption, The Drama of the Resurrection, and The Crucifixion; and Brussels, Early 16th Century, a gift of the William Randolph Hearst Foundation.

SPECIAL EVENTS: Classes in Art Enjoyment, conducted by Charles Lindstrom, featuring Painting for Pleasure and Exercises in Perception for the beginners; Seminars in the History of Art, a group of informal discussions; the Painting Workshop, painting from the model for the practice of observation and appreciation; and Children's Classes, conducted by Miriam Lindstrom, featuring Picture Making, Art and Nature, and the Art Club. Museum is open daily.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is featuring a number of outstanding exhibitions for this month including:

SPECIAL EXHIBITIONS: Stitches and Time, an exhibition of 500 years of European, Near Eastern and American textiles; Paintings by James Fosburgh; New Installation of French Paintings, from the Museum's permanent collection; Portrait Drawings and Sculpture, by Liesel Rosenthal; an Exhibition Commemorating United Nations Week; Photographs, by Oliver Gagliani, and Paper Sculpture, by William Shelley.

The Achenbach Foundation for Graphic Arts is featuring, at the Museum, New Directions in Contemporary Prints, Portraits of European and American Artists; and the Loan Exhibition at the San Francisco Public Library, is A Graphic Panorama of the Rise and Fall of Napoleon I, and The Animal World in Prints.

A plumb-bob view from the ceiling of the Grand Central Terminal, New York City, showing the marble floor which has resisted 400 million scraping feet a year for over 40 years. Terminal completed by Warren and Wetmore, Architects.

The World's Greatest Proving Ground for marble

There is probably no other building in the world which could have provided so exacting a test for any interior finishing material as this great terminal, where marble is used in such profusion. And no other finishing material for floors or wall surfaces could have as effectively met that challenge. Today, after being subjected for 40 years to an annual traffic flow thirty percent greater than the entire population of the United States, the marble is still beautiful — proof of the effectiveness of simple, systematic maintenance.

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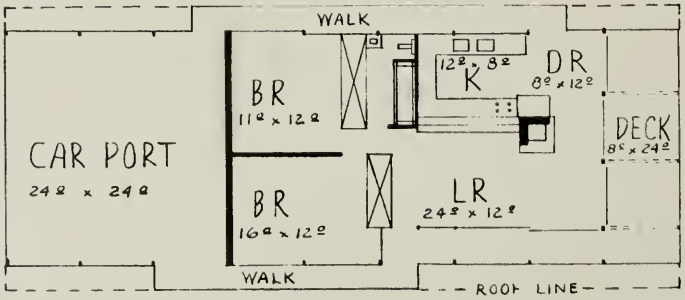
Industrial Designer

FLOOR PLAN



The union of engineering design together with residential construction can bring about a new beauty and quality of architecture and provide savings in costs as an additional merit to its credit. Hillside residential construction has long been a bogey to the contractor and the architect as the attendant bare hillsides of areas close-in to our West Coast cities indicate. However, a new approach to this old problem may provide some economical answers to an architecturally satisfactory solution—with the emphasis upon a simple engineering approach to the problems of "tying the house to the hill."

In the house pictured here, the simple solution of cantilevered steel girders resting upon reinforced-concrete block piers (laterally connected in the ground with reinforced concrete tie beams) was further enhanced by an integrated rigid-frame structure for floor and roof to provide a strong, light, low-cost structure upon which the plan and enclosing walls were attached.

The use of bolted or welded connections at all joints of a structural nature provides the necessary joint-fixation to form a rigid-frame, thus freeing the enclosing walls of the building from being load supporting members. This allows a greater freedom in open-type planning of rooms as all walls are independent of the structure and the designer may work with greater freedom in the planning and arrangement of rooms and living areas.

Wally Reemelin, Berkeley Industrial Designer and Mechanical Engineer, who is responsible for the design of the house pictured here (as well as several other hillside homes of similar type in the San Francisco Bay Area) has made a study of hillside construction during

The building leaps out from the brow of the hill, projecting into the tops of the trees below. From the edge of the deck to the ground is a distance of some 30 feet. The open area beneath the building is available for future expansion by economical enclosing walls and slab floor—again, the walls are non-bearing in character. The rear gallery connecting the kitchen with the carport is a convenient feature. Allowing the house to project out over the edge of the hill, frees the more level space adjacent to carport and street for level outdoor terrace and garden.

The house floats out through the oak trees as though suspended in the tree tops. The entrance gallery shown here continues as a promenade along the side of the living room to the deck which overlooks the canyon view below. The strong structural elements of the "K-frame" lateral bent supports here lend an effect similar to a "ship's bridge" to the promenade. The "K-frames" together with the floor and roof beams comprise the structural frame of the building and all other partitions and walls within the structure are non-bearing.

The entry, from the carport, gives covered access to the entrance door, as well as opening onto the promenade and deck. Masonry wall, forming a part of the abutment upon which the steel girders rest, provides a barrier between the house proper and the carport. The mass of the masonry wall provides a convenient lateral stiffening panel for the upper roof structure and, esthetically, affords a strong element in contrast with airy quality the supporting steel girders give to the balance of the structure. The fine integration of the building with the site is here in evidence with the encircling branches of the trees.

The Kitchen view towards the dining area — the view opens out from all rooms in an unbroken vista. The pass-thraugh counter ta the right is beneath the stained wood cabinets hung belaw the ceiling. A sliding glass daar at the left leads ta the rear gallery from the kitchen, giving covered access to the carport from the service area of the house.

The living room view out over the sun deck expresses the "open feeling" of the design. Here, the interior spaces are free from unnecessary structural elements and provide for an expansive volume of living and breathing space — giving the house an appearance of being much larger. To the left af the fireplace is a handy breakfast bar and pass-through shelf to the kitchen—where the housewife may visit with her guests while going about her kitchen preparatians.

the past 10 years. The design details noted here are some of the results of experiment and experience with hillside building problems during that time.

The home pictured here is that of the Daniel H. Talts, 365 Lakeview Way, Redwood City. Other hillside homes upon which Mr. Reemelin consulted are: Kenneth Pratt, 38 Sunrise Avenue, Mill Valley; Mr. and Mrs. William Reid, Jr., 7012 Snake Road, Oakland; Mr. and Mrs. Ralph A. Pringle, 5820 Colton Boulevard, Oakland; Mr. and Mrs. H. A. Brotz, 2 Cabrillo Place, Oakland; Studios for L. F. Reemelin, 1359-61 Glendale Avenue, Berkeley. All of these buildings show evidence of similar design principles in foundation and integrated rigid-frame structure such as this article describes.

The use of reinforced-concrete block design as a structural element reduces considerably the amount of bulk material necessary for hillside foundation structures. Where access to the site is a real problem (and it usually is on hillside work) the reduction in large amounts of trucked in bulk materials lowers the costs of foundation work and lessens the grading work necessary for extensive access roads to the site.

Steel, in conjunction with the reinforced masonry construction, readily allows for economical long spans and cantilever design, and, with the use of field welding, provides an easy means of affording strong, rigid connections at the joints—usually the weakest and most costly part of wood construction. The combination of steel and masonry also brings the fire-resistant and rot and termite-free qualities to the design at low cost, thus keeping long term maintenance costs down. This latter feature is appealing to any home owner who has had maintenance experience on older homes.

From experience, Mr. Reemelin has found that,

(See page 36)

The living room, looking toword the entry door and gallery. The lightweight fireplace with patent flue is supported directly by the floor joists. The all-wood interior of stained and waxed fir and plywood provides for interior warmth in contrast to the extensive glass areas. The outdoors and indoors seem to blend together though the window-walls freeing the observer from the closeted look ordinary construction practices bring about.

Western Progress in Metal Fabrication

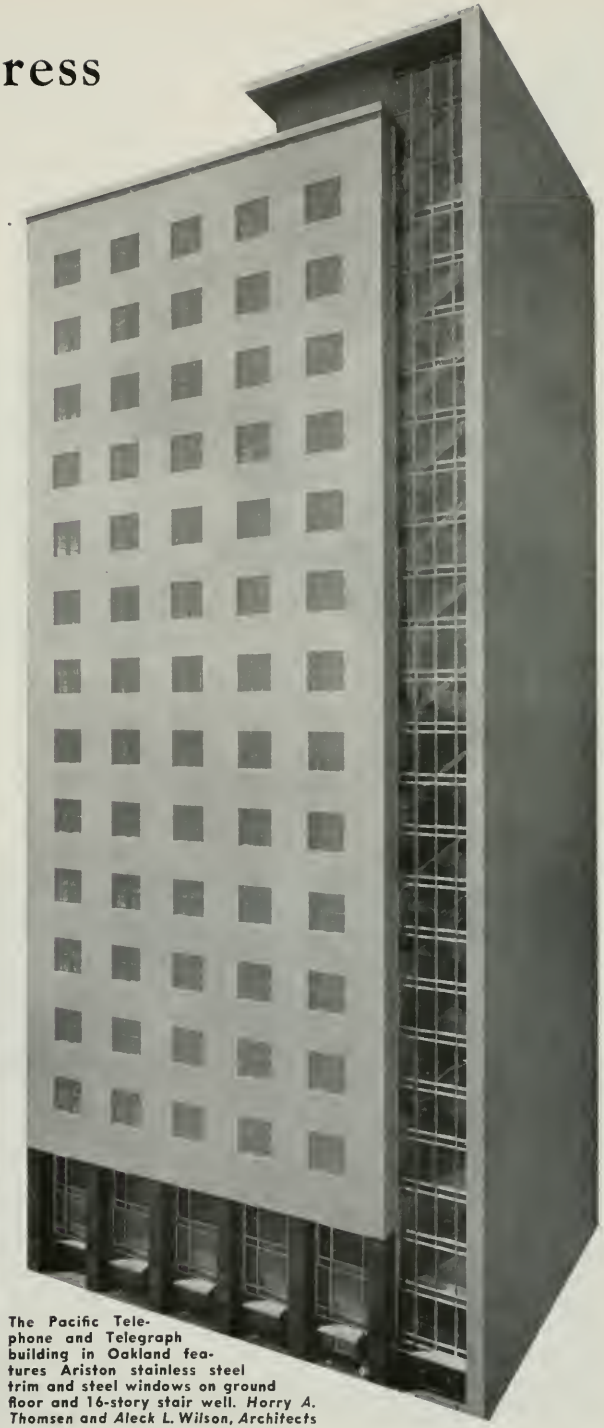
The tremendous growth of California and the West has seen an equally large growth in metal fabricating to meet the demands of architectural and construction firms.

Since the time of its founding in 1912, Michel and Pfeffer Iron Works, Inc., has followed a policy of "Metal Fabrication for Every Application." Today its products are found in many structures recognized as examples of outstanding architecture.

Ariston steel windows, for instance, are used in the new Kaiser Foundation Hospital in San Francisco. Arislide steel sliding doors are employed throughout the New Annex to the White Oaks School in San Carlos. Both products are used extensively in commercial and contemporary home construction along with the wide variety of other windows and doors manufactured by the company.

In the steel building field, the company has received recognition for its pre-fabricated service stations which speed erection and cut overall job costs.

The Marysville Pacific Telephone and Telegraph office utilizes Ariston steel sash, stainless steel entrance and door, steel stair rail. It is one of many telephone buildings using Michel & Pfeffer products.



The Pacific Telephone and Telegraph building in Oakland features Ariston stainless steel trim and steel windows on ground floor and 16-story stair well. *Horry A. Thomsen and Aleck L. Wilson, Architects*

Ornamental metal of many types includes cast metal tablets and plaques, spiral stairs, railings, folding gates, and specialty items in steel, bronze, aluminum and stainless steel.

Important to architects and builders is the recent development of Arislide aluminum sliding windows by Michel and Pfeffer.

Embodying quality features in every detail, the new windows were placed on the market only after extensive preliminary experimentation in the firm's engineering department.

Precision manufactured, the windows are competitively priced,

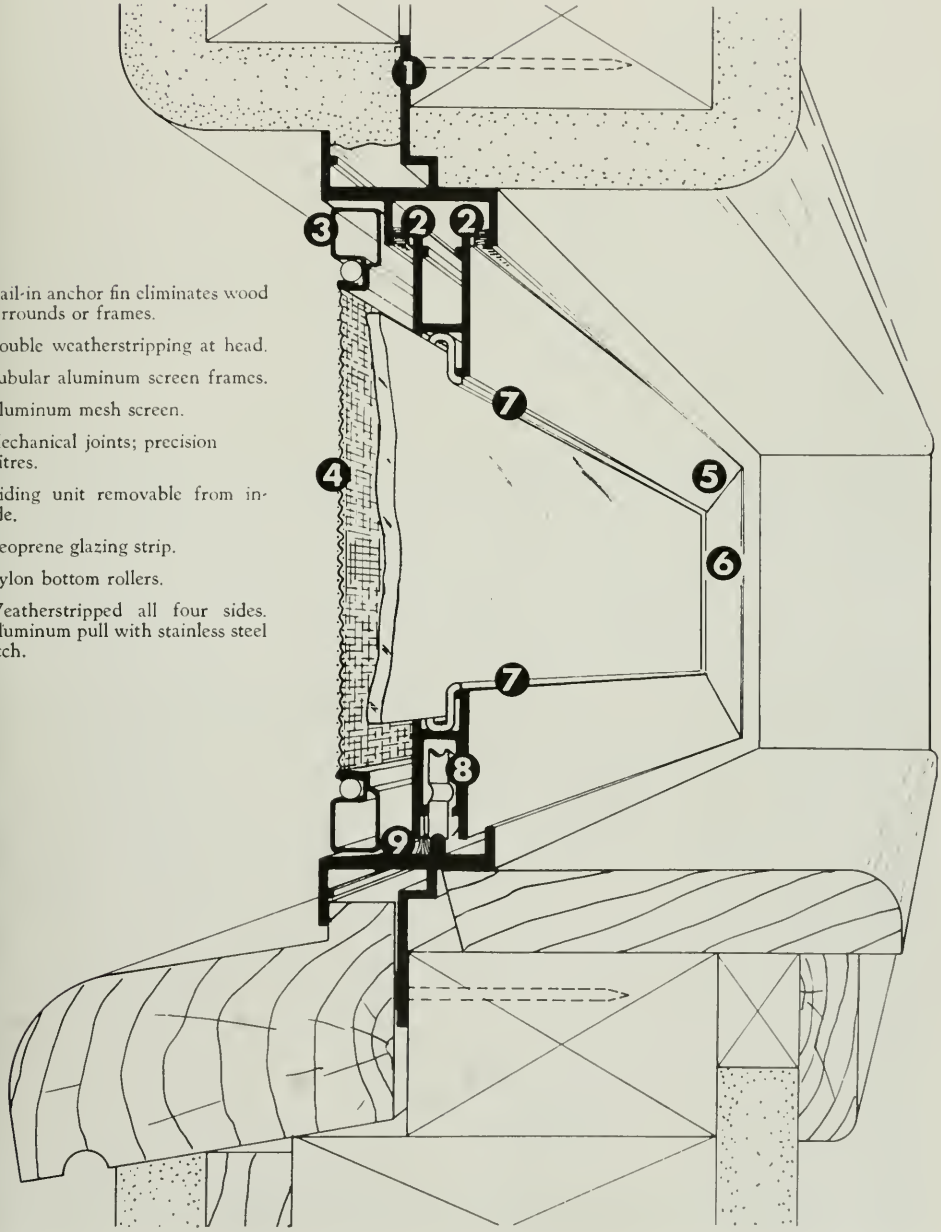
Indoor-outdoor living demands the use of these quality steel sliding doors.

Arislide steel sliding doors as used in the New Annex to the White Oaks School, San Carlos. ***John Carl Warnecke, Architect***

Ariston steel windows, Kaiser Foundation Hospital, San Francisco. ***Wolff and Phillips, Architects***

allowing their use in even popular-priced housing developments.

Since they may be shipped knocked-down, offering substantial freight savings, the products can be used economically in virtually any section of the United States.



1. Nail-in anchor fin eliminates wood surrounds or frames.
2. Double weatherstripping at head.
3. Tubular aluminum screen frames.
4. Aluminum mesh screen.
5. Mechanical joints; precision mitres.
6. Sliding unit removable from inside.
7. Neoprene glazing strip.
8. Nylon bottom rollers.
9. Weatherstripped all four sides. Aluminum pull with stainless steel latch.

Transition 1912 to 1954

Founded in 1912, Michel and Pfeffer Iron Works, Inc. first occupied this building in San Francisco.

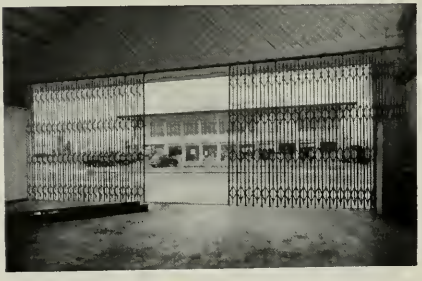
Today the company's South San Francisco plant occupies the large area shown in the aerial view below.

The organization is still under the active management of its founder, Mr. W. A. Pfeffer.

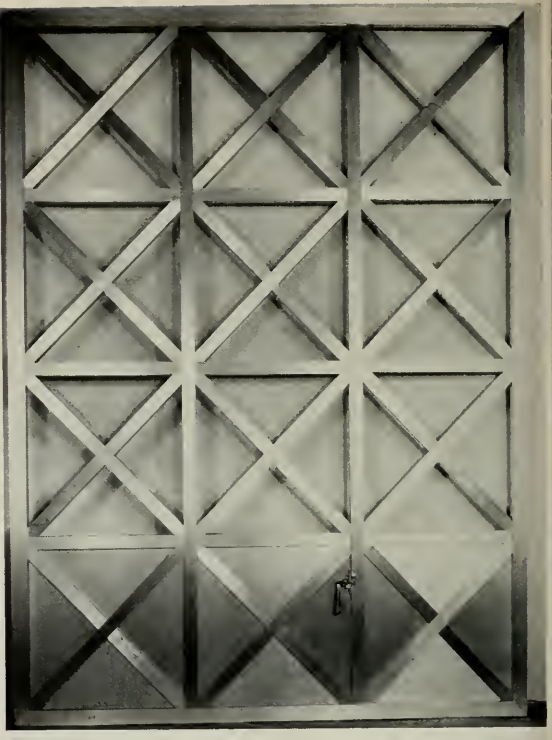
Circa 1925, this service station was an up-to-date steel building constructed by Michel and Pfeffer.

1954 finds the firm designing, fabricating and erecting stations like this—as well as Ariston steel buildings for drive-in restaurants, airport hangars and other uses.

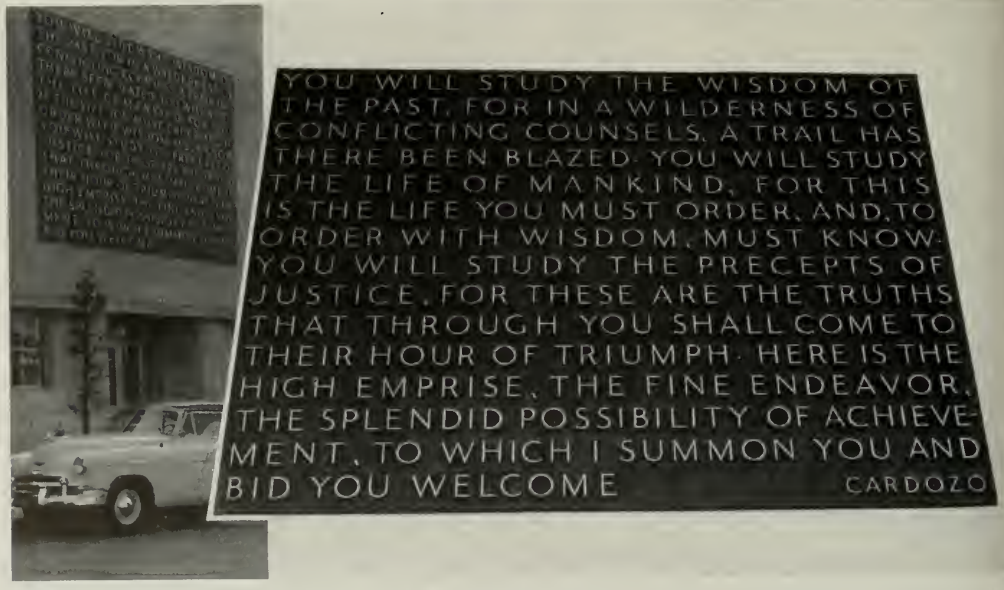
Aluminum and porcelain rails, by Michel and Pfeffer, San Jose High School. *Kump Associates, Architects*



Garage installation of folding gates.



Aluminum grille, Capitol Annex, Sacramento, specially-built by Michel and Pfeffer Iron Works, Inc.


YOU WILL STUDY THE WISDOM OF THE PAST, FOR IN A WILDERNESS OF CONFLICTING COUNSELS, A TRAIL HAS THERE BEEN BLAZED. YOU WILL STUDY THE LIFE OF MANKIND, FOR THIS IS THE LIFE YOU MUST ORDER, AND, TO ORDER WITH WISDOM, MUST KNOW. YOU WILL STUDY THE PRECEPTS OF JUSTICE, FOR THESE ARE THE TRUTHS THAT THROUGH YOU SHALL COME TO THEIR HOUR OF TRIUMPH. HERE IS THE HIGH EMPRISE, THE FINE ENDEAVOR, THE SPLENDID POSSIBILITY OF ACHIEVEMENT, TO WHICH I SUMMON YOU AND BID YOU WELCOME
CARDOZO

Cardozo's message on the walls of the Jurisprudence Building, University of California, stands out in 9" aluminum letters manufactured by Michel and Pfeffer. A close-up of the message is shown above with a portion of the building at left.
Warren C. Perry, Architect

The above picture, taken in June 1954, shows what determined and energetic merchants and property owners did to overcome their deficiency of parking. Fill of rock and dirt extends far enough beyond the back of buildings to furnish over 300 parking stalls. Refer to the picture below to visualize what was done. A new venture currently on foot is to extend the fill an additional 50 feet in a semi-circle to provide even more parking.

GREEN LIGHT GIVEN PROJECT AT PORT ORCHARD, WASHINGTON

As Told To FRANK EMERY COX

Sales Research and Business Development Analyst

By C. W. (RED) BECK

Secretary-Manager, South Kitsap Chamber of Commerce

Photograph at the right shows buildings on piles with obsolete piers and unsightly, useless tideland. This is the way the waterfront at Port Orchard appeared before 1950.

A typical before and after photograph of one of the stores which has benefited in volume by the parking and improving the store front and interior.

Photograph at right shows group inspecting the new improvements just completed by Hannah and Powell, druggists. Photograph below shows the entire building. The drug store is at the corner, and a medical-dental clinic has been developed in the rear where before the space was being used for storage and other unproductive purposes. The fill made this possible, and the foresight of the owners brought it into being.

The building before modernizing looked at the store level just like it does above the morquee. The new visual front has helped volume greatly.

The second floor will be modernized in the early spring, with additional space for offices and similar use.

ABOVE (at Right Center)

C. W. Beck, Secretary-Manager, Chamber of Commerce; (left to right) Tom Pelly, U. S. Congressman; Al Hodge, County Commissioner; Clarence Largis, Mayor; Fred Hannah, partner in store; Ed Heister, Chamber of Commerce President.

Not only the exteriors of buildings, but the interiors have been improved.

View at right shows interior of the Port Orchard Bank previous to remodeling.

When C. W. (Red) Beck, energetic and dynamic Secretary-Manager of the South Kitsap Chamber of Commerce at Port Orchard, Washington, suggested to his board of directors that something be done about the parking situation and the modernization of their city, he received an immediate response. A committee was formed to investigate and to do something about it. That was back in 1951. With the full cooperation of the Chamber of Commerce, this committee has accomplished miracles.

A recapitulation of what has been done, as told by Mr. Beck, is revealing.

Question: How many parking stalls did you have before the fill?
Answer: None.
Question: How many stalls does the fill provide?
Answer: 300.
Question: How much did the fill cost all together?
Answer: Almost $60,000.
Question: How long did it take to raise the money from those who contributed?
Answer: The planning and discussion period took about four months. After the planning, the money was raised in 10 days.

(See page 35)

Port Orchard Bank

View at left shows the elaborate remodeling of bank's interior.

New depositors have been attracted and banking business generally has increased as a result of the improvements.

Ticket Customers Wait In Comfortoble Lounge Section.

COMPLETELY NEW
Railroad Ticket Office

SAN FRANCISCO, CALIFORNIA

By W. F. MEANEY, A.I.A.

Architect, Southern Pacific Company

Purchasing a railroad ticket can be as pleasant an experience for passengers as a ride on a modern streamliner. With that idea in mind, Southern Pacific has designed a completely new ticket office system. It speeds up service and totally does away with tiresome waiting in line.

SP's "every-customer-is-first-in-line" plan is based on the fact that about 75 per cent of railroad ticket reservations are made by telephone. In the new ticket offices, customers are directed to a battery of telephones when they enter. They place their order directly with the reservations clerk, then wait in a comfortable lounge until a cashier pages them on a public address system. Even complicated ticket transactions often are handled in less than 15 minutes.

Southern Pacific first tried out this plan in a major

ticket office in Los Angeles' Pacific Electric Building about two years ago, and it proved an immediate success.

This September, the railroad moved its main San Francisco ticket office to SP's General Office Building on lower Market Street, where off-street parking for patrons could be provided and the new ticket sales system used. The main telephone reservation bureau being on the second floor, the tickets made up from telephoned orders could be sent downstairs by pneumatic tube.

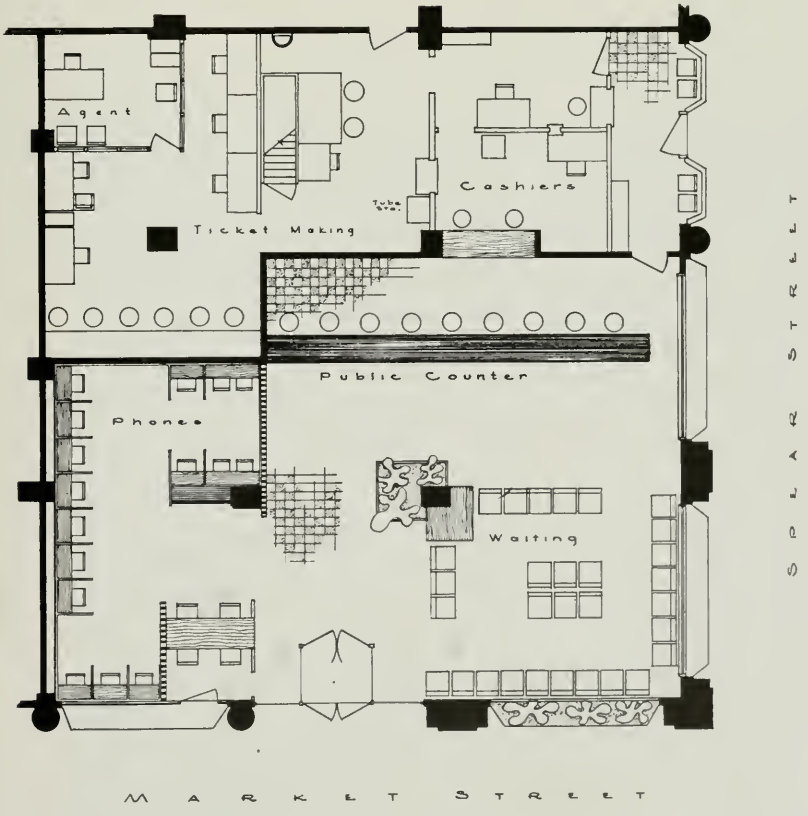
Architects of the company's Engineering Department redesigned a 55′ x 57′ corner store space, with an 18′ ceiling typical of store quarters built with a mezzanine in mind. The ceiling was dropped to 11′-6″ in the main area and 9′-0″ in the phone room, with suspended panels, painted coffee brown to complement the mahogany paneling.

At the entrance, the patron is directed by a floor man to the phone room to the left. Vertical, floor-to-ceiling louvers and a travel folder rack give a feeling of privacy to the phone room without cutting it off from the main ticket office area. The 12 phone booths lining the walls are separated by mahogany fins, extending from the walls and resting on black wrought iron legs. Over each individual booth is a semi-recessed parabolic spot which lights a flame-colored shelf running between the fins. An ivory plastic phone is above each shelf, on the wall, providing the direct line to the reservation bureau. A wrought iron side chair, upholstered in citron yellow plastic (for easy maintenance), and a pigskin-bound book illustrating accommodations and scenic routes of SP trains are at each phone.

Two double booths, with connecting phones, are provided for couples, and there is an interview desk near the entrance where any patrons preferring not to use the phone can be given personal help with their travel arrangements.

When the patron's reservation has been placed by

FLOOR PLAN



TICKET OFFICE . . .

SOUTHERN PACIFIC customers are paged to a cashier's counter—so, they are always "first in line" in picking up their tickets.

phone, he is referred to folders of interest by number and asked to wait in the lounge area while his ticket is being prepared. This area features 30 modern boomerang chairs (the name is derived from the shape of the mahogany side pieces), with foam rubber seat and back upholstered in gold colored plastic fabric, nestling in a black wrought iron frame.

The flooring is rubber tile, dark brown in the phone room and a checkerboard brown and tan in the lounge.

The problem of the hot, late afternoon sun coming in the side windows to the west was solved with vertical Venetian blinds, which are usually kept drawn. Flush ceiling fixtures give a soft, general light.

Main points of decorating interest are lush planting area around an old central column (given a new facing of mahogany) and an unusual clock—the only decorative wall treatment. The clock is a three foot, black iron wheel. The hands are shallow, five-inch disks, one coral and one mustard yellow, on narrow black arms. A turquoise disk is at the center.

Tied into the center column, to balance the planter,

(See page 32)

TELEPHONE TICKET ORDERS eliminate necessity of customers having to "stand in line." Vertical louvers divide the phone room from the general ticket office area.

SECOND ANNUAL CHURCH ARCHITECTURAL EXHIBIT

The 2nd Annual Church Architectural Exhibit and Exposition was held at the Breakfast Club in Los Angeles on October 29-30.

The event was again co-sponsored by the Los Angeles Chamber of Commerce and the Southern California Chapter of The American Institute of Architects, with arrangements under the direction of John J. Lundon, A.I.A., chairman of the Committee.

The architectural exhibit features photographs, models and drawings of recently completed churches throughout Southern California, and all denominations are represented in the Exposition.

The stained glass, mosaic tile, church furniture and other ecclesiastical arts are represented by approximately forty material exhibits. A feature of this year's exposition was the artisans working at their various crafts.

The program also included lectures on such provocative subjects as, "Is Contemporary Church Architecture Communistic?" with the speaker being Architect Walter R. Hogedohm, A.I.A. Another feature was a panel discussion by distinguished churchmen of each denomination, on the subject, "Economics of Church Construction," moderated by C. Herman Light, A.I.A., Architect. An innovation was the holding of an advisory panel of architects including Herbert Powell, Paul Hunter and Al Chaix; another interesting and educational panel comprising architects Robert Inslee, Gene Verge, Carleton Winston and William Woollett, discussed the subject of "Modern Church Design," with a questions and answers period following each of the panel discussions.

2ND ANNUAL ARCHITECTURAL JOURNALISM AWARDS OPEN

Awards for writing and photography in the field of architecture, initiated last year by The American Institute of Architects, will again be given by the A.I.A., according to an announcement by Clair W. Ditchy, president of the Institute.

Objective is "to recognize and encourage writing . . . that will further the public understanding of Architecture and the Architect."

Awards will be made in March, but entries close January 15. Applications for entry may be obtained by writing the A.I.A., Washington, D. C.

RUSSELL C. WEBER has joined the firm of LeRoy Crandall & Associates, Consulting Foundation Engineers, Los Angeles, as a partner.

WILL INSURANCE COVER YOUR LOSS?

During the past several months various forms of insurance have been discussed in detail in this page. The actual value of insurance is more clearly demonstrated from actual cases and we have culled some actual instances from our own files and those of some of the insurance companies. In every instance these are actual cases.

It is a well known fact that steel can't burn. If a certain contractor had relied on this assumption he would be a poorer but wiser contractor today. The 14 story steel skeleton had been erected when some forms on the floor caught fire. The heat from these forms melted and twisted the steel frame on the 12th, 13th and 14th floors into a mass of scrap metal. The cost to the contractor's insurance company was $1,000,000.00. The cost of fire insurance on this building if it had been in a large California city would have been $500 for $1,000,000 insurance.

HENRY J. TRAINOR
Consultant, Miller & Ames, Insurance Brokers

A contractor subbed out a $700,000 job on a large dam. Within two weeks, even before the Bonding Company had collected the premium, the subcontractor was in the hands of the creditors. There was very little salvage. The contract was renegotiated and the work carried through without any loss to the general contractor. The only unpleasant aspect of the whole occurrence was the pained expression of the bond underwriters. The general contractor considered the $7,000 premium one of the wisest investments he had made.

There are certain accidents that never occur such as Euclids colliding head-on in the middle of the Mojave Desert. Not long ago, of course, it happened and an astonished underwriter received word that they were both a total loss $70,000 worth of junk. This claim outlined the tendency on the part of many to undervalue equipment scheduled on floater policies with the thought that they are saving a few dollars in premium. Generally, contractor's equipment is difficult to demolish but it is the big loss which really requires insurance. Had this particular contractor underinsured his equipment he wouldn't have been nearly so pleased with his loss draft.

Back East a few years ago an old pickup was finally retired to the scrap people. As a matter of fact, the last trip was when the contractor drove it into the junk yard. Two years later, a couple of youngsters playing there struck a match and the gasoline in the tank of the pickup exploded, injuring both boys seriously. It was like a voice from the grave when the unfortunate contractor heard he was the defendant in a $50,000 law suit. Had the contractor carried a standard automobile policy which insures only the automobile schedu'ed on the policy, he would have defended the suit and paid the settlement out of his own pocket. Most contractors wisely purchase a Comprehensive Liability policy which insures all liability arising during the policy term.

A curious case was decided not too long ago in California where contractors built a house in 1925. In 1943 the railing gave way and the girl suffered serious injuries when she fell ten feet on to concrete. The investigation revealed the railing had been negligently secured by finishing nails. Despite the fact that construction was finished 18 years prior to the accident, the courts held the contractor responsible for the injuries and substantial damages were awarded the injured girl. In the intervening years one of the partners of the original contracting firm had died so the entire verdict was directed against the surviving partner.

While the circumstances in each of these claims is unusual, similar accidents are occurring every day and prove the value of these various forms of insurance.

EDITOR'S NOTE: The insurance brokerage firm of Miller & Ames, San Francisco, has for many years specialized in administration of insurance programs for all phases of the construction industry, and further explanation of any points raised in this series of articles will be gladly furnished upon request.

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Earl T. Heitschmidt, 1st Vice President — George Bain Cummings, Secretary
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OREGON CHAPTER

Robert Anshen of Anshen & Allen, Architects, San Francisco, and Elmer Gavello, builder, discussed various phases of residential construction at a meeting held in the Columbia Athletic Club on October 25.

A photographic reproduction of the design awards from the Boston A.I.A. convention will be on exhibit at the third floor gallery of the Portland Central Public Library until November 9th.

KRAFTILE

Announces Helpful New Service

Facts on use of Kraftile Structural Wall Units in Showers, Toilets, Locker Rooms, etc. are presented in the first of a series of Data Sheets, now ready for distribution.

Other Data Sheets, covering additional specific uses, are being prepared.

Write today. We will send you the first Data Sheet, along with convenient file folder in which to store it and other Data Sheets as issued. No cost or obligation, of course.

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SAN DIEGO CHAPTER

Wm. D. Myers of the Portland Cement Association was the principal speaker at the October meeting, and in addition to discussing the subject of "concrete" presented a motion picture entitled "Quality Concrete, Transporting, Placing and Finishing." He also showed a number of colored slides on "Aggregate Transfer."

Announcement that a local chapter of the Construction Specifications Institute had been formed in San Diego was made. The nationwide organization is composed of specification writers, architects and others directly concerned with the writing of specifications.

New members: Fred Chillcot and Harvey Smith, Corporate Members.

WASHINGTON STATE CHAPTER

Wheeler Williams, internationally known sculptor and architect, was the principal speaker at the October meeting held in the Music Building Auditorium of the University of Washington in Seattle. He spoke on his work in the field of sculpture and its essential relation to architecture and the alliance of the arts in Seattle. The meeting was jointly sponsored by the

Orange County Chapter:
Philmer J. Ellerbrook, President; John A. Nordbak, Vice-President; Chas. A. Hunter, Treasurer; Gates W. Burrows, Secretary. Directors: Everett E. Parks, Chas. A. Hunter and Everett L. Child. Chapter office 1606 Bust St., Santa Ana.

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Lewis A. Storrs, President; Lutah Maria Riggs, Vice-President; Robert Ingle Hoyt, Secretary; Roy W. Cheesman, Treas. Corresponding Secretary: F. Raymond Ford, 238 La Marina, Santa Barbara.

Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
Nelson I. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Robert H. Wohleb, 2nd Vice-President; Gordon N. Johnson, Secretary; Robert A. Parker, Treasurer. Directors: Silas E. Nelson, Lyle N. Swedberg.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
John S. Detlie, President; Ralf E. Decker, 1st Vice-President; Edwin T. Turner, 2nd Vice-President; Wendell H. Lovett, Secretary; Arnold G. Gangnes, Treas. Directors Paul Thiry, William J. Bain, J. Emil Anderson and Robert B. Price. Dayis Holcomb, Ex-Sec., 409 Central Bldg., Seattle 4.

Spokane Chapter:
Tom Adkinson, President; Carroll Martel, Vice-President; Harry Weller, 2nd Vice-President; William James, Secretary; Lawrence Evanoff, Treasurer. Office of the Secretary, W. 524 - 4th Ave., Spokane.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave.. Honolulu, T. H.

CALIFORNIA COUNCIL OF ARCHITECTS
Malcolm Reynolds, President; Henry L. Wright, Vice-President; George Lind, Secretary; John Bomberger, Treasurer. Miss Rhoda Monks, Office Secretary, Offices, 26 O'Farrell St., San Francisco.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

Chapter and the University, Office of Lectures and Concerts.

New Members: David R. Anderson, Albert O. Bumgardner, Aaron D. Freed, Merrill S. Rich and Gene K. Zema, Corporate Members; James E. Hussey, Theodore LaCourse, Robert B. Rowe, and William H. Trogdon, Associate Members.

PASADENA CHAPTER

Burt Romberger, editor of the Chapter Bulletin, has moved to Newport Beach, Lido Isle, where he has opened offices and will therefore give up his duties as Bulletin editor. A successor has not thus far been announced.

The October meeting was a combined business meeting and inspection of the newly completed Pasadena headquarters for the Southern California Gas Company, remodeled under direction of member Bill Taylor

FULBRIGHT SCHOLARSHIPS FOR ARCHITECTS

Young American architects have a chance to study abroad during 1955-56 under the U. S. Government educational exchange program.

Candidates in the field of architecture may enter the general competition for Fulbright scholarships. Full information from the Institute of International Education, 1 East 67th Street, New York City.

SOUTHERN CALIFORNIA CHAPTER

Following a brief business meeting the Producers Council of Southern California took over and presented a program of fun and entertainment. Prior to the dinner and cocktail hour, members and Producers Council members had gathered at the Riviera Country Club in Pacific Palisades and engaged in various sports including golf, baseball, etc., it being the Annual Field Day program.

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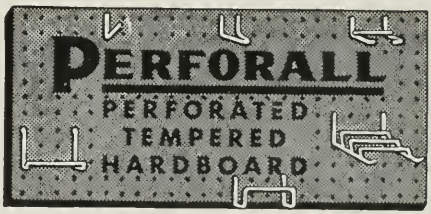

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Structural Engineers Association of California

Harold P. King, President, Sherman Oaks; M. A. Ewing, Vice-President, Sacramento; Joseph Sheffet, Sec.-Treas., Hollywood. Directors, Ben Benioff, Ernest D. Francis, John J. Gould, L. W. Graham, G. A. Sedgwick, and W. T. Wheeler. Secretary's Office, 844 Seward St., Hollywood 38.

Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

W. S. Wassum, President; Charles M. Herd, Vice-President; J. F. Meehan, Sec-Treas. Directors: L. G. Amundsen, M. A. Ewing, Chas. M. Herd, R. F. Silberstein and W. S. Wassum. Office Sec. 68 Aiken Way, Sacramento, Calif.

American Society of Civil Engineers Los Angeles Section

Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

AMERICAN SOCIETY OF CIVIL ENGINEERS

William Roy Glidden of Richmond, Virginia, has been elected president of the American Society of Civil Engineers. He is Assistant Chief Engineer of the Virginia State Department of Highways.

The new president will serve one year and succeeds Daniel V. Terrell of Lexington, Dean of Engineering at the University of Kentucky.

Other officers named to serve with Glidden included Frank L. Weaver, Washington, D. C., Chief, Division of River Basins, Vice-President; and Louis R. Howson of Chicago, partner in the firm of Alvord, Burdick & Howson. New Directors are Don M. Corbett, Washington, D. C., District Engineer, U. S. Geological Survey; Lawrence A. Elsener, San Francisco; Jewell M. Garrelts, Prof., Columbia University; Frederick H. Paulson, Providence, R. I.; George S. Richardson, Pittsburgh; and Graham P. Willoughby, Birmingham, Ala.

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

S. K. Banerji, a native of Calcutta and now Consul General of India in San Francisco, was the principal speaker at the October meeting held in the Presidio Officers Club, Presidio of San Francisco.

Banerji spoke on the Political Situation in India and gave some very interesting observations.

Announcement was made that General Sturgis, Chief of Engineers, will address the February meeting.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

"Structural Failures and What the Structural Engineer May Learn from Them," was the subject of the October meeting held in the Rodger Young Auditorium, Los Angeles. Henry Layne served as Moderator of the panel discussion which included: "Wood Bow String Truss Failures at San Mateo and Redwood City," by August E. Waegemann, San Francisco structural engineer; "Lift Slab Failure at San Mateo," by O. G. Bowen; "800-Foot High Tower Failure in Spokane, Washington," by John K. Minasian; and "Bent Failure at the Naval Amphibious Base, Coronado," by Ed Martin and Bill Bobisch.

New Members include: R. W. Hall and Henry Woo, Associate; George A. Heap and George R. Saunders, Member; Marvin A. Hornstein, Junior; John Replogle, Allied; and H. F. Ross, Affiliate.

CONSULTING ENGINEERS ASSOCIATION MEETS

The second annual convention of the Consulting Engineers Association of California will hold their meetings at the Ambassador Hotel, Los Angeles, November 6-8, announced Pecos H. Calahan, executive secretary of the association.

The three-day meeting will include two days of social activity and one full day devoted to a general business session. John K. Minasian, Pasadena structural engineer, and William T. Wheeler, Los Angeles structural engineer, are in charge of program events.

AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco Section

The October meeting featured an address by D. J. Russell, president of the Southern Pacific Railway, who spoke on recent and future developments in railroading from an engineering viewpoint.

Russell pointed out that improved design coupled with modern imagination has produced some eye-opening features in today's railroad facilities.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The November meeting has been scheduled as a "Meeting With the Building Officials" and will comprise a number of speakers including Henry J. Degenkolb, Structural Engineer; John V. Schwafel, Building

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of
Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of
Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

Inspector; Robert R. Matheu, Structural Engineer; and Richard Foraker, Building Inspector.

Building officials in the area surrounding the San Francisco Bay Area are being invited to attend the meeting, scheduled for November 3rd in the Engineers Club, San Francisco.

News Members: Herbert J. Rokita and Harold B. Hammill, Members; Oliver E. Merwin, Affiliate; Samuel A. Fletcher, and Robert E. Jones, Junior Members.

ENGINEERS ON SAN FRANCISCO ADVISORY BOARD

Mayor Elmer E. Robinson has appointed six engineers to serve as members of the City's Forward Committee, including:

Robert Dewell, Structural Engineer; E. Elmore Hutchinson, Civil Engineer; Richard E. Kennedy, Sanitary Engineer; William W. Moore, Foundation Engineer; G. A. Sedgwick, Structural Engineer; and G. M. Simonson, Electrical and Mechanical Engineer.

STANDARDS ENGINEERS SOCIETY HONOR CALIFORNIA ENGINEER

Former President Herbert Hoover, Vice Admiral G. F. Hussey, Jr., and the late Dr. Paul Gough Agnew were selected by the Standards Engineers Society as the first recipients of its highest award —the status of Fellow in the Society. The posthumous award to Dr. Agnew was that of Honorary Fellow. The awards were announced at the Society's Third Annual Meeting, held at Haddon Hall, Atlantic City, N. J., October 1 and 2.

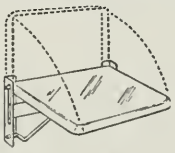
The Society's citation to Hoover reads: "Statesman, public leader, and great engineer, he has distinguished himself in his profession, in the eyes of his country, and before the world as protagonist of the principles on which standards operate—efficient production and elimination of waste. In his early career as Secretary of Commerce he recognized the significance to the country's economy of a movement then in its infancy, and stimulated its development by creating the Division of Simplified Practice. The work he then started never lost his support. As thirtieth President of the United States, he continued to further the movement. As Chairman of the committee that bears his name, already noted for its wise and statesmanlike proposals for efficient, economical government reorganization, he emphasized the importance of standards in achieving the desired efficiency and economy. He stands before the world as a symbol of integrity and efficiency and as a pioneer Standards Engineer."

ENGINEER ADDRESSES GROUP OF AUSTRIAN ENGINEERS AND ARCHITECTS

Milton Karp, Los Angeles engineer, recently addressed a meeting of the Austrian Society of Engineers and Architects in Vienna, Austria, on the subject, "Structural Engineering in California." Karp is on an extended European trip and will visit many foreign countries before returning to Los Angeles.

ARTHUR W. ANDERSON was elected President of the California Legislative Council of Professional Engineers for 1954-1955 term.

HANDY folding SEAT



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CONVENTION HIGHLIGHTS

The regional convention of the California Council of Architects was held at Hobergs Resort, Lake County, on September 29-30, October 1 and 2—the convention is now over but a lot of us are still living it in our dreams and a few are still trying to recuperate.

* * *

A record attendance of nearly 750 made the convention one of the most successful—several events which took place bear repeating. The annual baseball test between the north and the south was again the main sports event—the north as in the previous year, lost the game but they are catching up and next year the trophy should be in the hands of the northerners. Al West was one of the heroes of the game, but unfortunately broke his collar bone and had to be carried off the field. The amazing Alex Wilson got a hole in one, the first on that course, and to celebrate bought a case of champagne for the boys. Charlie Masten is pretty rugged when it comes to horseshoes, but did not win. Bill Corlett was too scientific, and won the tournament.

* * *

The Producers' Council Sportsmen's dinner was a great success. First to receive a token of appreciation was Bourne Hayne who was given a beautiful "lei" of the most exquisite type by John Cowley. To climax the affair, the Producers' Council held a beauty contest—it will be long remembered because the "Girls" were unique. It was quite a lengthy performance as each one of them had to be handled very delicately by the Judges—whose shaky fingers could not hold the measuring device, so the judging had to be done in a more informal manner. The winner by acclamation, was Don Kirby, "Miss San Francisco"—(here is where the Northerners have the advantage!). A photograph was taken showing our "Venus de Hoberg," but the writer did not have the courage to ask Don Kirby to have it reprinted in this article. Don received a magnificent modern tub as first prize, and when upon occasion, he fills it with champagne, he will remember his triumph!

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PERSONALITIES

ROBERT D. DEWELL
Engineer

San Francisco, California

Robert D. Dewell, civil and structural engineer, received his B.S. in Civil Engineering from the University of California in 1932, and then engaged in Post Graduate work at Cornell University for the next two years specializing in Indeterminite Structures.

ROBERT D. DEWELL

Following year he was with the Civilian Office and Field Engineer with U. S. Coast and Geodetic survey working in the development of Radio Acoustic Ranging.

Subsequent activities included investigation and reports on 1933 Long Beach earthquake and design of school buildings, miscellaneous structures and two 3,000,000 gal. elevated concrete water storage tanks.

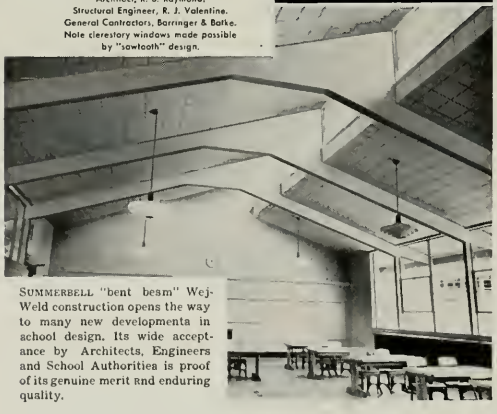
Became Resident Engineer for the City of Sacramento in 1939 with complete supervision of design and construction of a 3,000,000 gal. overhead concrete storage tank. Supervised construction of Albers Bros. grain elevator in Oakland in 1940 and from 1940 to 1943 served as Structural Engineer for A. W. Earl in the design of buildings for defense projects.

In private practice since 1946 as Consulting Civil and Structural Engineer in the construction of churches, markets, warehouses, stores, industrial buildings, athletic stadiums, and schools.

Dewell resides with his wife and two children in Oakland; hobbies are golf, gardening. Member, past secretary, and director, S. F. Section, ASCE; Member and Director SEANC; Member and Director, Consulting Engineers Ass'n of California; Member Engineers Club; Past vice-president and Director of Society of American Military Engineers.

Summerbell for SCHOOLS

Elementary School, Santa Paula, California.
Architect, R. S. Raymond.
Structural Engineer, R. J. Valentine.
General Contractors, Barringer & Burke.
Note clerestory windows made possible by "sawtooth" design.



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HOME BUILDERS MAKE CONVENTION PLANS

The National Association of Home Builders has announced its 11th annual Convention and Exposition will be held in Chicago on January 16-20, 1955.

Some 18,000 of the nation's leading home builders are expected to attend and participate in a carefully planned program designed to acquaint them with the up-to-the-minute technical developments, sales and merchandising methods and mortgage financing conditions.

Members of this year's Convention Committee include Albert L. LaPierre, Seattle, Washington; and Wilson H. Brown of Dallas, Texas.

TICKET OFFICE

(From page 24)

is a low magazine table with the same flame composition top appearing on the phone shelves and cashier's counter. Two spots, high on the column, highlight the planting area.

A speaker system in the suspended ceiling pages the waiting patron and directs him to one of nine stations at the 33-foot counter at the back of the room. He is always first in line. The long counter is broken only by station markers, which have hidden shelves to keep the clutter out of sight.

The prepared tickets come from the ticket making machines in a back room to a cashier who operates the speaker system and hands the envelope to the appropriate counter clerk through a window in the back wall.

The exchange of money for a ticket is quick and the total standing time of a customer is rarely more than a minute.

BUILDING INDUSTRY CONFERENCE BOARD ACHIEVEMENT AWARDS

The Building Industry Conference Board's annual awards dinner, commemorating the 20th anniversary of the founding of the Board, will be held Thursday, November 4, in the St. Francis Hotel, San Francisco.

Included in the evening's program is the presentation of the annual Achievement Award of 1954 and The Honor Award of 1954.

WM. E. HAGUE
Honorary Secretary

Ralph A. Tudor, Consulting Engineer and recently Undersecretary of the Interior will be the guest speaker.

The meeting will also pay a tribute to Wm. E. Hague, who until his retirement, was manager of the Central California Chapter, Associated General Contractors, and assisted in the organization of the BICB in 1934. He received the BICB Honorary Award in 1950.

Last year the Board's Achievement Award went to Dr. Robert Gordon Sproul, president of the University of California, and the Honor Award was given to Walter L. Huber, San Francisco, engineer and past president of the American Society of Civil Engineers.

Raymond H. Brown, Gladding, McBean & Company is in charge of tickets for the event. Hundreds of the area's contractors, architects, engineers, and building material men are expected to attend.

CALIFORNIA'S FIRST STATE ARCHITECT

George Sellon, 73, died October 13 in the Livermore Sanitarium following a prolonged illness. Born in San Francisco he later graduated from the Chicago Art Institute and as a representative of the State of California helped to reconstruct San Francisco following the earthquake and fire of 1906.

As State Architect, Sellon directed the organization of the Division of Architecture, and as a private architect planned many of Sacramento's outstanding structures, including the $1.5 million addition to the Sacramento County Hospital, the old California Western States Life Insurance Co. building, the Almond Growers Association building, Bank of America, and numerous court houses in Northern California.

Early this year Sellon merged his office with Whitson W. Cox, and the offiffice was operated under the name of Sellon & Cox. Another partner, J. R. Liske, has been with the firm for several years.

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ALASKA DEFENSE CONSTRUCTION

Ten contracts totalling close to $3,500,000 for construction needed at Army posts and Air Force bases in Alaska were awarded during September by the Alaska District, Corps of Engineers, who will supervise the construction until it is turned over to the Armed Forces ready for use.

Localities where work will be done includes Fort Richardson, Whittier, Elmondorf Air Force Base, and Ladd and Eielson Air Force Bases.

IDEAL CEMENT EXPANSION

Ideal Cement Company will have spent $40,000,000 on its post-war expansion program by the end of 1954, increasing its production from 7,000,000 barrels to over 20,000,000 barrels, according to a report by President Cris Dobbins and Executive Vice-President M. O. Mathews.

Ideal recently purchased an industrial site in Vancouver, B. C., and obtained options on nearby limestone properties, and also acquired by purchase the Spokane Portland Cement Company.

Acquisition of the new properties opens a new, expanded, operation for Ideal in the Pacific Northwest.

RESIDENTIAL DEVELOPMENT

Mark Toper and Gerald Hoyt have acquired the 960 acre Teixeiro Ranch, located about two miles north of the City of San Rafael, California, on the Redwood Highway, 101, and will soon start development of the property for residential purposes.

The project calls for construction of more than 4,000 homes, plus a shopping center and other essential community development activities.

WOOLWORTH'S FOR FRESNO

Architect Walter Wagner of Fresno, is completing drawings for the construction of a new store building in the City of Fresno for the F. W. Woolworth Company, San Francisco.

The building will be of 1-story construction 75x150 ft.; masonry and structural steel frame.

CHURCH AND SUNDAY SCHOOL

Architect Charles D. Jones of Madera, is working on drawings for the construction of a new Church building which will include facilities for Sunday School sessions and a Fellowship Hall.

Of frame and concrete block construction the estimated cost is $250,000.

GYMNASIUM FOR GIRLS

Architect Chas. D. James of Madera, is working on preliminary drawings for the construction of a girls' gymnasium for the Madera High School.

The new building will be of frame and stucco construction and will cost an estimated $190,000.

NEW CHURCH AND SCHOOL

Architect Vincent G. Rancy of San Francisco is completing drawings for construction of a new Church and Parochial School, Convent and Rectory to be built in Our Lady of Mercy Parish of Westlake residential development project near Daly City.

The project will be of reinforced concrete, tilt-up and lift-slab type of construction. Estimated cost is $350,000.

NEW COURT HOUSE TULARE COUNTY

Architects Horn & Mortland of Fresno, and Architect Richard P. Clair of Visalia, have completed plans for the construction of a new County Court House building in Visalia for Tulare County.

The project calls for a 4-story building of structural steel frame, reinforced concrete and reinforced brick with porcelain enameled panels; air conditioning and all factors to make the building modern in every respect.

Estimated cost is $2,500,000.

LIBRARY BUILDING

The architectural firm of Higgins & Root, San Jose, are working on drawings for the construction of a 1-story frame and stucco Library building to be erected in the City of Santa Clara for the City of Santa Clara.

Preliminary estimates indicate the new building will cost approximately $78,000.

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PORT ORCHARD

(From page 21)

Question: How did you arrive at the amount each one should contribute, and how was it contributed?

Answer: Our committee discussed every business and landlord in town. A suggested amount was recommended for each one, based upon several factors, i.e., the amount of property involved, the size of the business and, to a great extent, the ability to pay. Every individual was personally contacted and the plan was presented to them. It was suggested that the entire amount be paid in not more than three installments over a one year period.

Question: Why did not the city participate in financing?

Answer: Because the Washington state law at present prohibits any governmental agency going into the parking lot business. In other words, there is no enabling legislation to permit city participation.

Question: I notice you have parking meters. Where does that revenue go?

Answer: Into the general fund.

Question: How much does that revenue amount to annually?

Answer: Approximately $5,000.

Question: Was there any noticeable change in attitude towards parking meters after the fill was completed?

Answer: Prior to the fill, the merchants in town "fed" the parking meters and presented a courtesy parking ticket to any violators. This plan did not work very well, however, because people began to abuse the privilege, and it had to be stopped. When the fill was ready, publicity was given to the free parking available, and this drew a great many cars from the curb and opened up the parking meter stalls for short range parking.

Question: What other points might be of interest in connection with this fill?

Answer: The fill is partially on state tidelands. The town of Port Orchard acquired a long-term lease for a token payment and at no cost to the town. The merchants were permitted to fill the area to attain access to the area. Actually, the city is not in the parking business, but they let us make the fill for access purposes. We started from nothing four years ago, and although we have 300 stalls on this fill today, our parking problem is just as acute now as it was then. Our plans are to enlarge the fill another 50 feet out into the water as soon as we can acquire the money. This is now in process.

Question: Has this parking lot stimulated business on your main street (Bay Street)?

Answer: Yes. This is readily observed by noticing the difference in the town today compared to what it was four years ago.

Question: What are your population figures?

Answer: Port Orchard, 2,828; trading area estimated 15,000, comprising about 138 square miles.

Question: How did the main street modernization movement get underway?

Answer: The provision of parking stimulated interest in the improvement of the stores. We realized it was necessary to have our stores look bright and up to date in order to compete with neighboring shopping centers and other cities' facilities.

The before and after pictures indicate many of the improvements which were made, both inside and out. As you know, the "step by step" city modernization plan which was suggested is now partly in effect and bearing fruit. Some comments from some proprietors of jobs already completed are of interest:

"My furniture business tripled as a result of modernization during the first few

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SCREEN and METAL SASH DOOR
★
The "WEATHER-WISE" DOOR!!
A VENTILATING SCREEN DOOR
A SASH DOOR
A PERMANENT OUTSIDE DOOR
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Discriminating home owners and architects have chosen Hollywood Junior as the TRIPLE DOOR VALUE in the COMBINATION SCREEN and METAL SASH DOOR field! A sturdy dependable door, constructed of quality materials, HOLLYWOOD JUNIOR'S EXCLUSIVE PATENTED FEATURES have outmoded old-fashioned screen doors and other doors of its type entirely! . . . . .
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months and is still showing a steady increase."

"Business has increased one-third since modernization."

"Our volume has more than doubled since modernization."

"You have no idea of the good will and additional customers which modernizing our store brought in."

Beck continued, "We feel that we are retaining a great deal of business that would otherwise have been lost, and we are attracting much volume back which had already started going elsewhere.

"Credit for untiring efforts in connection with the entire parking and modernization movements should go to the Port Orchard Merchant's Committee as they have been largely responsible for what has been done. They are: Fred Hannah, Ross Powell, "Dusty" Winebrenner, William Sprague, Virgil Parks and Bob Rice.

"This movement has just started, and we are enthusiastic about further developments in the future. We have had wonderful cooperation from a good many public spirited building concerns, such as The Kawneer Company, and we appreciate all of this help tremendously."

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Forms close 20th of month preceding date of publication.

ARCHITECT & ENGINEER
MAGAZINE
68 Post Street San Francisco

HILLSIDE HOUSE

(From page 12)

through proper use of steel, concrete, masonry and timber, the bogey of hillside home construction may be greatly eliminated, and the costs of the completed structure can compare favorably with those of buildings constructed by typical standard construction on level to moderate sloping sites. This alone can open up the more extensive use of "problem" hillside sites at moderate costs—with properly designed, soundly engineered construction. Since hillside living at its best provides vistas of view and opens out to sunshine while affording privacy due to contour elevation, the "extras" of hillside living may now move over to the "credit side" instead of being so much on the "cost side" as in the past.

EDITOR'S NOTE: Wally Reemelin, Berkeley Industrial Designer, Consulting Mechanical Engineer. Art school and industrial design study at San Diego State College; construction foreman and designer for contracting firm before World War II in San Diego; Graduate, Civil Engineering, U. C., Berkeley; Licensed Mechanical Engineer, State of California; Wartime engineering work on industrial plants, processes and products; Designer and Consulting Engineer in San Francisco and Berkeley since World War II.

AMERICAN CONCRETE INSTITUTE MEETS IN LOS ANGELES

The American Concrete Institute will hold their Los Angeles regional meeting in the Hotel Statler, October 28-29, with technical discussions to include: Properties and Tests of Concrete, Earthquake and Blast Design, New Techniques and Recent Developments in Concrete Design and Construction; and an open forum sponsored by the Structural Engineers Association of Southern California.

ENGINEER JOINS DONLEY

Walter H. Lobenstein, Jr., Structural Engineer, Los Angeles, has become associated with Roy Donley, AIA, architect, with offices in Los Angeles.

PICTURE CREDITS for this issue: Robert S. Foster, Bottom page 19, top left page 20, bottom page 20, top page 21, bottom page 21; Northwest Air Photos, Top page 19; Bob's Photo Shop, Top right page 20; Wally Reemelin, Pages 8, 9, 10, 11 and 12.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

URBAN TRAFFIC—A Function of Land Use. By Robert B. Mitchell and Chester Rapkin. Columbia University Press, 2960 Broadway, New York 27. Price $5.00.

Assuming that a better understanding of the movement of people and goods to and from buildings is basic to understanding traffic problems, this book makes important contributions to solving traffic congestion. It develops means of analyzing the flow of people and goods in cities.

The authors attempt to go beyond the "origin and destination" approach to studying traff c problems, and analyze traffic in terms of its underlying causes—the necessity for people to move, and goods to be transported, from one place to another. Showing which of these movements are regular and predictable, which are sporadic and only predictable in the mass, they find that all movements fall within certain large systems.

These large systems in turn are manifestations of organized systems of land-based urban activities. Each type of establishment constituting bases of activity has its own part'cular relationship to the movement of persons and goods in all its aspects.

The book explores these relationships, the various methods of analyzing them, and the techniques of collecting information about them. Many figures and tables are shown including studies made in Philadelphia, Washington, D. C., Sacramento, Calif., and Portland, Oregon.

SIMPLIFIED ROOF FRAMING. 2nd Edition. By J. Douglas Wilson and S. O. Werner. McGraw-Hill Book Co., 330 W. 42nd St., New York 36. Price $3.25.

Here is a clear, concise manual of roof framing, sound and accurate enough for the professional carpenter, yet simple enough for the layman who is building his own home.

It covers common types of roofs and how to lay out all types of rafters required in them; gives clear-cut princ ples that enable the reader to do roof work without the use of mechanical drawing, geometry, and trigonometry. Short-cut methods of working made possible by the steel square are given in this book; explains the use of the square as applied to various construction problems; describes the rafter tables that appear on different makes of squares; and shows how to use the square in stair work.

APPLIED ATOMIC ENERGY. By K. Fearnside, E. W. Jones and E. N. Shaw. Philosophical Library, 15 E. 40th Street, New York 16. Price $4.75.

The application of atomic energy to peaceful purposes, in the shape of radioactive isotopes, has been introduced only in the last years, but already a number of problems have been satisfactorily solved by the new techniques thus made available.

This book provides a background knowledge of nuclear physics necessary to an understanding of the advantages to be derived from these techniques and discusses a large number of applications to different fields of pure and applied science, including radiography techniques and the use of isotopes in pure research, in biological work, industrially, for medical purposes and on the land. It also discusses the prospects of useful power generation and problems of international control.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Automatic boilers. A new 4-page bulletin describes the operation and advantages of the Continental automatic boiler's "spinning Gas Technique"—called a method of obtaining maximum heat transfer with simplified design; bulletin shows cut-away view of boiler construction; illustrates hinged doors and shows method of injecting air through static, turbine-like vanes into the burner. Write DEPT-A&E, Boiler Engineering & Supply Co, Phoenixville, Pa.

Elementary school stage lighting. New brochure (A.I.A. File Nos 31-F-25 and 31-D-22) deals with development in design and utilization of elementary school auditoriums; constantly increasing importance of creative dramatics brings into sharp

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CATALOGUES — Available

focus the chronic lack of adequate stage lighting that handicaps these school activities; bulletin gives in detail specifications, drawings, description of equipment for both permanently installed and portable elements. Free copy write DEPT-A&E, Hub Electric Co, 2255 W. Grand Ave, Chicago 12, Ill.

Freezer doors. Super freezer doors for use to minus 50 degrees F and described in a new catalog that also gives construction and design details together with valuable check list for picking correct door; included are complete specifications for various standard doors, optional features; size tables and dimension details are listed for both walk-in, reach-in and vestibule type door; sketches, photographs, illustrations and prints to scale supplement the product; 3 full pages devoted to various types and ten special duty doors. Write DEPT-A&E, Jamison Cold Storage Door Co, Hagerstown, Md.

Lighting equipment. Comprehensive bulletin just issued covers lighting equipment particularly luminaires and wall urns; includes 4 distinct types, 1) totally indirect, 2) indirect with illuminated bowl, 3) indirect with minor direct lighting component, and 4) direct with illuminated bowls; also complete data on wattages, lamp sizes, dimensions, application suggestions and other pertinent information; detailed engineering data, photographs of each type of unit; specifications for correct luminaires and wall urns required for illuminating offices, public buildings, stores, institutions, etc. Write DEPT-A&E, Pittsburgh Reflector Co, 487 Oliver Bldg., Pittsburgh 22, Pa.

Compaction handbook. Comprehensive informational booklet containing complete information regarding soil compaction problems; a concise compilation of materials (formerly available only through a great deal of research), valuable as a field manual for supervisors on backfill compaction jobs; describes tried and proven methods; includes also a background on various types of soils, their identifications, classifications and engineering characteristics and a graphic engineering chart; types and use of proper equipment. Free copy, write DEPT-A&E, Gunderson-Taylor Machinery Co., 1201-1237 Shoshone St., Denver 4, Colo.

Indirect lighting equipment. Just off the press, a useful handbook on lighting equipment for indirect lighting, strip lighting, interior spot lighting, and interior flood lighting; also completely cataloged is accessory equipment for these applications including louvres, roundels, wire guards and other accessories for achieving distinctive and proper lighting results; specifications and distribution data. Free copy, write DEPT-A&E, Pittsburgh Reflector Co., 487 Oliver Bldg., Pittsburgh 22, Pa.

Industrial waste and refuse disposal. New pamphlet gives complete data on portable incinerators (A.I.A. File No. 35-J-41), capacities up to 450 pounds average waste per hour; schedule of models and capacities, stack requirements, installation photographs; complete description and specifications. Write DEPT-A&E, Plibrico Co., 1800 No. Kingsbury St., Chicago 14, Ill.

Door closers. Twenty-eight years of specialization in the problems of door control are briefed in a new catalog on door closers (A.I.A. File 27-B) including overhead concealed, closers concealed in doors, closers concealed in floors; typical installation illustrations and construction details; specifications and accessories. Free copy available write DEPT-A&E, LCN Closers, Inc., Princeton, Ill.

What every home owner should know about heating. Newly printed brochure written in non-technical terms so anyone can understand; explains basic fundamentals of home heating; tells how to get low-cost heating which is clean, quiet and safe, gives comfort without awareness of heat, uniform floor-to-ceiling temperatures, minimum temperature fluctuations and elimination of drafts. Write for free copy DEPT-A&E, Trane Co., La Crosse, Wis.

New valve for automatic control of water. Slip-sheet just published on a new valve for automatically controlling the flow of water; low cost; brass construction, wide range of pressure controls, self cleaning action; size ½" and ¾", capacities from 2 to 8 gals. per min.; selection and installation data. Free copy, write DEPT-A&E, Bell & Gossett Co., Morton Grove, Ill.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—

Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ½" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.

Cash discount on L.C.L. 2%

Trinity White, Medusa White, Calaveras White — 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	---	.62

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—

$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	13/16x2¼	½x2	⅜x2	¼x2
	$	$	$	$
Clear Qtd., White	$425	$405		
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390 00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides. ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225 00
"C" and better—all	225 00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry—8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square. $15.25
¾" to 1¼" x 24/26 in split resewn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard	$ .75
Three-coat work	per yard	1.00
Cold water painting	per yard	25c
Whiteweshing	per yard	15c

Linseed Oil, Strictly Pure (Besis 7¾ lbs. per gal.)		Wholesale Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Besis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply. ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square. $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square. 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square. 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless.
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜". ..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored 12 x 12, each	$ .17

Kraftile: Per square foot

	Small Lots	Large Lots
Patio Tile—Niles Red 12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., OU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., OU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St., YU 2-RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 275 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 475 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13 000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES
(ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

MASONIC LODGE, Newport Beach, Los Angeles county. Masonic Building Assn., Newport Beach, owner. frame and stucco, brick veneer lodge building; composition roofing, concrete and asphalt tile floors, steel sash, forced air heating, brick fireplace, interior plaster, toilet rooms, kitchen, ceramic tile work, asphaltic concrete parking area; 7000 sq. ft. of floor area, $35,000. ARCHITECT: Paul Davis, Los Angeles. GENERAL CONTRACTOR: c/o Architect.

HIGH SCHOOL ADD'N., Ukiah, Mendocino county. Ukiah Union High School District, Ukiah, owner. 1 and 2-story reinforced concrete addition to the High School building to provide space for home making unit; frame and stucco, $191,387. ARCHITECT: C. A. Caulkins, Jr., Santa Rosa. GENERAL CONTRACTOR: C. H. Smythe, Lakeport.

BANK BLDG., Bank of Berkeley, Alameda county. Bank of Berkeley, Shattuck Ave., Berkeley, owner. Interior and exterior remodel of present building, $47,449. ARCHITECT: Ratcliff & Ratcliff, Berkeley. GENERAL CONTRACTOR: F. P. Lathrop Const. Co., Berkeley.

LEMON PACKING PLANT, Carpenteria, Santa Barbara county. Carpenteria Lemon Ass'n., Carpenteria, owner. Frame and stucco exterior, slab floors, truss roof, insulation board interior ceiling and walls with insulation filler, built-up roofing, electrical work; 138x315 feet in area. ARCHITECT: William Ache, Los Angeles. GENERAL CONTRACTOR: Stolte, Inc., San Leandro.

ELEMENTARY SCHOOL, Morenci, Arizona. Morenci School District, Morenci, owner. New plant will comprise administrative building, 2 classroom buildings, multipurpose room; 1 story, 15 rooms; poured gypsum roof deck, cement floor, hot water heat, air conditioning, steel roof trusses, steel sash, ceramic tile, $128,440. ARCHITECT: Edward L. Varney & Associates, Phoenix, Ariz. GENERAL CONTRACTOR: Daum-Donaldson, Phoenix.

APARTMENT, San Francisco. Angus McSweeney and Philip Barnett, San Francisco, owners. 14-story, 98 apartments; 4 floors devoted to garage space for 98 cars; reinforced concrete construction, steel sash, 2 elevators, master television antennae, insulation, electric kitchens, $1,500,000. ARCHITECT: Angus McSweeney, San

Francisco. GENERAL CONTRACTOR: Cahill Bros., San Francisco.

PLAYGROUND IMPROVEMENTS, San Francisco. Recreation and Park Commission, City and County of San Francisco, owners. Improvements to the Margaret Hayward Playground, Turk, Golden Gate and Gough streets in San Francisco, $283,973. GENERAL CONTRACTOR: Martinelli Const. Co., San Francisco.

HOTEL-APTS., San Francisco. Travelodge Corp., San Diego, owner. 2-story frame and stucco construction; 49 units, $125,000. ARCHITECT: Knecht, San Diego. GENERAL CONTRACTOR: Travelodge Const. Co., San Diego.

CHURCH, Walnut Creek, Contra Costa county. Trinity Lutheran Church, Walnut Creek, owner. Stone and frame construction with laminated wood arches; 5,500 sq. ft., $103,588. ARCHITECT: Skidmore, Owings & Merrill, San Francisco. GENERAL CONTRACTOR: Fred C. Von Gunthner, Orinda.

FISH HATCHERY, Friant, Fresno county. State of California, Dept. of Fish & Game, Sacramento, owner. Construction of

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.85S
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.75	3.4375	3.25
MARBLE SETTER	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.75	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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CLINIC BLD. ADDN., Marysville, Yuba county. Marysville Clinic, Marysville, owner. 1-story, frame and stucco addition to existing clinic, $46,360. ARCHITECT: Franceschi & Mullen, Sacramento. GENERAL CONTRACTOR: G. I. Beer & Sons, Yuba City.

CONCRETE BLEACHERS, El Camino High School, Sacramento county. San Juan Union High School District, Fair Oaks, owner. Reinforced concrete bleachers for athletic stadium, $22,922. ARCHITECT: Charles F. Dean, Sacramento. GENERAL CONTRACTOR: George J. Harlan, Sacramento.

MEMORIAL HALL, Stanford University, Palo Alto. Board of Trustees, University of Stanford, Palo Alto, owner. Crothers Memorial Hall dormitory for 100 men; 3-story, reinforced concrete construction, $400,000. ARCHITECT: Spencer & Ambrose, San Francisco. GENERAL CONTRACTOR: Wagner & Martinez, San Francisco.

RESTAURANT, Monterey Highway, San Jose. Howard C. Hurt, owner. 1 story frame construction, 3000 sq. ft. of floor area, $30,000. ARCHITECT: Gifford E. Sobery, Los Gatos. GENERAL CONTRACTOR: H. F. Oliver Co., San Jose.

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CHURCH & SUNDAY SCHOOL, Calvin Presbyterial Church, Santa Clara county. Calvin Presbyterian Church, San Jose, owner. Frame and stucco construction, new church building and Sunday School facilities, $197,575. ARCHITECT: Higgins & Root, San Jose. GENERAL CONTRACTOR: Oscar W. Meyer, San Jose.

FACTORY, Hegenberger Loop, Alameda county. Underground Const. Co., Oakland, owner. 1-story reinforced concrete, tilt-up; 60x102 feet factory type building. STRUCTURAL ENGINEER: H. M. O'Neil, Oakland. GENERAL CONTRACTOR: A. S. Holmes & Son, Oakland.

SUNDAY SCHOOL & SOCIAL HALL, Palo Alto. 1st Presbyterian Church, Palo Alto, owner. Frame and stucco construction, shake roof, $226,900. ARCHITECT: Leslie I. Nichols, Palo Alto. GENERAL CONTRACTOR: Morris Daley, Burlingame.

HIGH SCHOOL, Mira Monte High School, Contra Costa county. Alcalanes Union High School District, Orinda, owner. First unit comprising administrative offices, 5 classrooms, home making, art, shops, gymnasium, boys and girls showers and lockers, football field and toilets; wood frame, reinforced tilt-up concrete walls, structural steel in gymnasium, $559,000. ARCHITECT: Kump & Associates, San Francisco. GENERAL CONTRACTOR: Pacific Coast Builders, San Francisco.

GARDENA HIGH SCHOOL, Gardena, Los Angeles county. Los Angeles Board of Education, Los Angeles, owner. Project includes 23 buildings, 64 classrooms, library, study hall, assembly hall, administration, cafeteria, multi-purpose, shop buildings, special classrooms, boys and girls gymnasium, student store, agriculture classrooms, bath house, athletic field and bleachers, $3,606,000. ARCHITECT: H. L. Gogerty, Los Angeles. GENERAL CONTRACTOR: J. C. Boespflug Const. Co., Los Angeles.

NEWSPAPER PRESSROOM, Daily Independent, San Rafael, Marin county. Independent-Journal Publishing Co., San Rafael, owners. 1 story structural steel frame and reinforced concrete addition to present building to be used as a pressroom, $20,000. ARCHITECT: Gromme, Mulvin & Priestly, San Rafael. GENERAL CONTRACTOR: Herbert A. Crocker Co, San Rafael.

CAFETERIA BLDG., High School, Sebastopol, Sonoma county. Anly Union High School District, Sebastopol, owner. Addition of a frame and stucco cafeteria building to the Sebastopol High School, $145,541. ARCHITECT: J. Clarence Felciano, Santa Rosa. GENERAL CONTRACTOR: E. H. Moore & Son, San Francisco.

GYMNASIUM, Mater Dei High School, Santa Ana, Orange county. Roman Catholic Archbishop of Los Angeles, Lns Angeles, owner. Tilt-up construction, tapered steel girders, maple flooring, acoustical tile ceilings, suspended gas heaters, toilets, electrical work, steel sash, kitchen; 10,000 sq. ft. floor area. ARCHITECT: Barker & Ott. Los Angeles. GENERAL CONTRACTOR: B. L. Mecalf, Orange.

DORMITORIES, Preston School, Amador county. State of California, Sacramento, owner. Two 1-story dormitories, concrete floors, grouted reinforced brick walls, concrete and concrete block interior

walls, steel sash, composition roofing, refrigeration, electrical work; 22,600 sq. ft. floor area, $328,913. ARCHITECT: State of California. GENERAL CONTRACTOR: George W. Reed, Sacramento.

LIBRARY, Fresno State College. State of California, Sacramento, owner. 2 story with mezzanine, steel frame, concrete floors, cellulare steel deck, steel roof deck, insulated roof, metal partitions, steel and aluminum sash, wood doors, acoustical tile, ceramic tile, metal stairs, terrazzo, venetian blinds, elevators, library stack equipment; 52,700 sq. ft. of floor space, $466,750. ARCHITECT: State of California. GENERAL CONTRACTOR: Harris Const. Co, Fresno.

IN THE NEWS

JET AIRCRAFT MANUFACTURING

Construction of a three-unit steel assembly building for construction of the Navy's smallest and lightest jet combat plane has been started by the Douglas Aircraft Co's El Segundo Division at an estimated cost of $1,500,000.

Holmes & Narver, Inc., Los Angeles, Architects-Engineers, designed the new plant, which is of prefabricated steel, with corrugated pre-painted metal siding. 186,000 sq. ft. of floor space will be provided.

RICHMOND GETS SUPERMARKET

Structural Engineer J. Y. Long, Oakland, has designed a 1-story structural steel frame and reinforced concrete supermarket building containing 35,000 sq. ft. of floor area. The building is to be built in the City of Richmond for Town Markets, Inc. at an estimated cost of $400,000.

CITY-COUNTY BUILDINGS

Architect Kenneth H. Hess, Ventura, is working on drawings for construction of a combination jail, police station, and city-county office building to be built in the City of Oxnard jointly by the City of Oxnard and Ventura county.

The building will be 3-story, 140x138 Type 1 with gravel roof, forced air heating, air conditioning, asphalt paving, elevators and all necessary components.

ARCHITECT DESIGNS SCHOOL

Architect Donald Powers Smith of San Francisco, is completing preliminary drawing for the Sunnyvale Elementary School District, Santa Clara County, for a new San Miguel Elementary School.

The new school will contain 20 classrooms, administration facilities, library, multi-purpose room, kitchen and toilet rooms. Construction will be of reinforced concrete and frame.

WESTERN RED CEDAR GROUP OPENS OFFICE

Establishment of an office for the Western Red Cedar Lumber Association in Seattle, Washington, has been announced by R. M. Ingram, president of the new organization.

Arthur I. Ellsworth, a native of the Pacific Northwest and graduate of the University of Washington, has been appointed Association manager.

Organized in April of this year, the Association comprises cedar lumber manufacturers from the State of Washington and British Columbia, with purposes to develop product research and promotion.

Officers of the new organization include: R. M. Ingram, E. C. Miller Cedar Lumber Co, Aberdeen, Washington; Don Johnston, Flavelle Cedar, Ltd., Port Moody, B. C.; John A. McCrory, Seattle Cedar Lumber Mfg. Co, Seattle; William Hulbert, Jr., William Hulbert Mill Co, Everett, Wash.; and Frank Pendleton, British Columbia Forest Products Co, Vancouver, B. C.

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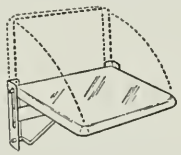

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CANDY FACTORY RESTAURANT

The architectural firm of Hertzka & Knowles, San Francisco, representing Blums, and architect John Bolles, representing Macy's Department Store, San Francisco, are collaborating in the preparation of drawings for the construction of a

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combination restaurant, candy factory and bakery building embodying the remodeling of properties at the corner of Polk and California streets in San Francisco.

The remodeled building owned by Macy's will be occupied by Blum's.

TWO LARGE SHOPPING CENTERS ARE PLANNED

The architectural firm of Victor Gruen, Los Angeles, recently announced plans were being drawn for construction of two new shopping centers in the San Francisco Bay Area.

One of the projects calls for development of a $10,000,000 Valley Fair Shopping Center near San Jose, and the other is a $25,000,000 Bay-Fair Shopping Center to be built near San Leandro in Alameda County. Both projects represent construction of strictly modern facilities for all types of commercial enterprise.

MUSIC BUILDING SANTA BARBARA

The architectural firm of Pereira & Luckman of Los Angeles are completing working drawings for the construction of a reinforced concrete and concrete block music building at the University of California, Santa Barbara.

The building will be 2-story L-shaped, with a 1-story wing of faculty and departmental offices. Among facilities provided will be a teaching laboratory, rehearsal room for 120 students, a choral rehearsal room for 150 students, two instrumental classrooms for 20 students each, several general assignment classrooms, 32 practice rooms, 4 small ensemble rooms for 15 students each, organ practice room, and faculty offices.

Estimated cost of the project is $780,000.

BRICK AND TILE INDUSTRY CENTER

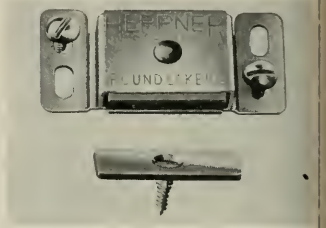
The brick and tile industry will build a national research center to house its development efforts, according to an announcement by Robert B. Taylor, director of the Structural Clay Products Research Foundation.

The new research center will be constructed in the Chicago area and will also serve as general offices for the Institute.

The Structural Clay Products Research Foundation was formed in January, 1950, and has invested more than a million and a half dollars in efforts to lower the cost and improve the quality of structures built of brick and tile products. Last year the industry approved formation of a permanent research organization and pledged more than $400,000 a year to its support.

NEW MAGNETIC POWER LATCH

A powerful new magnetic door latch for heavier doors has been announced by Heppner Sales Company.



Screen, closet and other heavier doors are kept firmly closed even if warped or sagging by the unprecedented 10 lb. holding force, which is 320 times the permanent magnet's ½ ounce weight, a far greater efficiency ratio than ever before attained.

Design is compact, measuring only 2⅛" L by ½" H and weighing 1¾ oz.; packed ready for instant mounting; self aligning feature makes installation easy, speedy and foolproof. Complete data from Heppner Sales Co, Round Lake, Ill.

RUSSELL C. WEBER WITH L. A. FIRM

Russell C. Weber has joined the firm of LeROY CRANDALL & ASSOCIATES, Consulting Foundation Engineers as a partner, according to a recent announcement by LeRoy Crandall.

Offices of the firm are located at 1614 Beverly Boulevard, Los Angeles.

LAS VEGAS HOTEL

Architect Paul R. Williams of Los Angeles, is preparing plans for the construction of the new Continental Hotel in Las Vegas, Nevada.

The building will contain 250 rooms, with front portion of the building rising

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to six stories and 2-floor guest rooms in the rear. Included also will be a sidewalk cafe, Hawaiian Room, and a New Orleans Room. Estimated cost of the project is $5,000,000.

SWIMMING POOL BONDS APPROVED

Voters of Sunnyvale, California, recently approved issuance of $100,000 special bonds with funds to be used in the construction of a swimming pool in Washington Park, Santa Clara County.

COURT'S SITE IS ACQUIRED

Site of the Los Angeles County Courts Building to be built in the City of Pomona, has been acquired with the purchase of property in the entire block between 5th and 6th and between Gordon and Main streets.

The architectural firm of Randall & Yinger of Pomona, have been commissioned by the Los Angeles Board of Supervisors to draft preliminary drawings for the building which it is estimated will cost $630,000.

PORTLAND GETS NEW HOTEL

Leo F. Corrigan of Dallas, Texas, recently announced that the architectural firm of Barnett, Haynes, Barnett, Inc., of San Francisco, are working on preliminary plans for the construction of a 20-story structural steel and reinforced concrete hotel building to be built at Broadway, Salmon, 6th and Taylor streets in Portland, Oregon.

The new hotel will provide complete facilities for 1,000 guest rooms and baths, and will cost an estimated $12,000,000.

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ARCHITECT SELECTED

Architect Frank C. Treseder of Los Gatos, has been commissioned by the Board of Supervisors of Santa Clara County to draw plans and specifications for the construction of a new County Jail Building, to be erected in the City of San Jose.

WOODWORK GROUP FORMS NEW UNITS

The Woodwork Institute of California established two new standing committees to work with jobbers and manufacturers, and according to Russell Bjorn, manager-director, the new committees will plan their own programs and then coordinate them into the Institute's overall activities.

Chairmen of the committees, appointed

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by Robert Hogan, Institute president, were Harry Libby of John W. Koehl & Son, Inc., Los Angeles, head of the jobbers' unit; and Thomas Work of the Work Mill & Cabinet Co, of Monterey, head of the manufacturers' group.

MODERN DOOR HARDWARE

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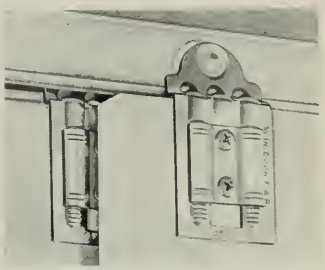

Complete unit-packaged sets are available, including track and all hardware to simplify and benefit both retailer and customer. 1⅛" headroom required; doors from ¾" to 1⅜" in thickness can be accommodated, single or multiple installations. Available for openings up to 10' in width. Complete data and catalog available from manufacturer, Lawrence Bros., Inc., Sterling, Ill.

RANCHO CORDOVA SHOPPING CENTER

The architectural firm of Rickey & Brooks, Sacramento, is completing drawings for construction of a new Shopping Center to be located on Folsom Blvd., near Mather Field.

The first unit will comprise 2 buildings, 64x160 ft. each, and will be of frame and stucco construction with shake roof and concrete floors.

MEN'S CLOTHING STORE REMODEL

Architects Confer & Willis of Oakland are working on possibilities of remodeling Smith's Men's Clothing Store in Richmond.

The project comprises remodel inside and out of the present 2-story building and installation of a new store front. Estimated cost is $200,000.

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*Indicates Alternate Months

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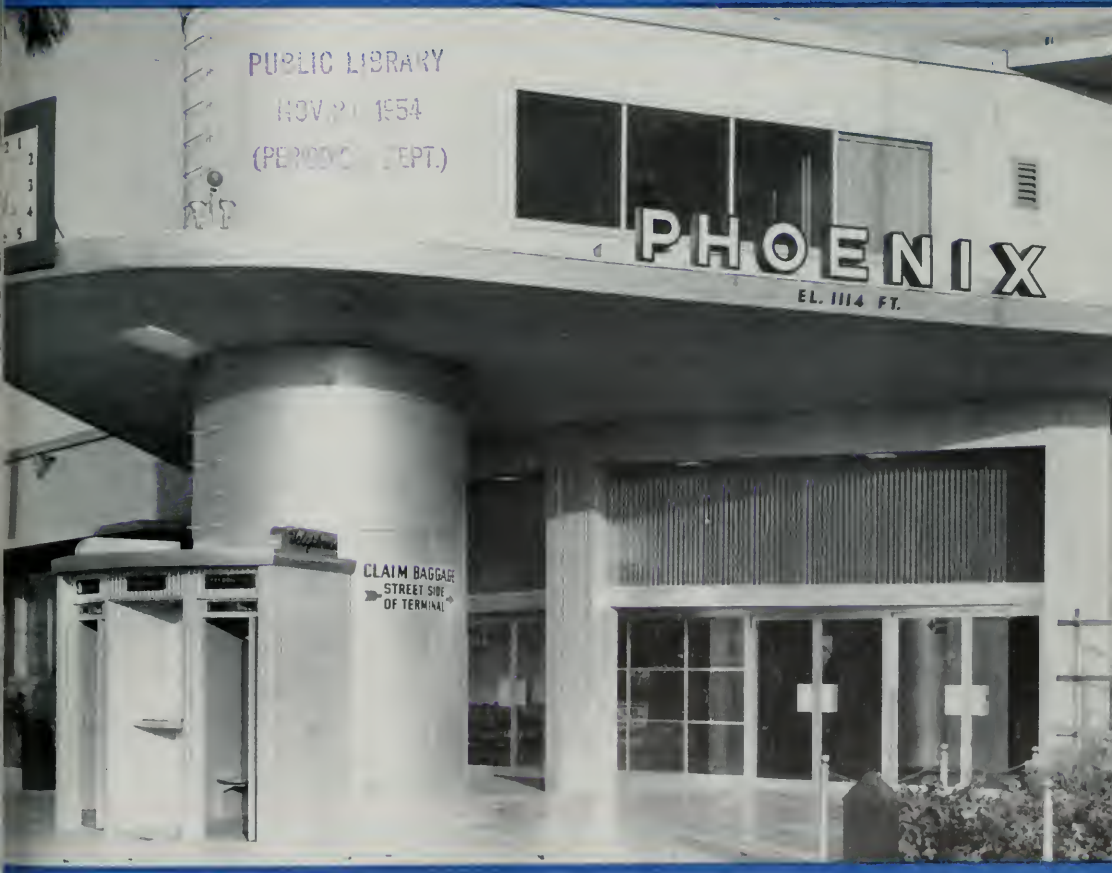
FIELD ENTRANCE . . . Sky Harbor Airport, Phoenix, Arizona



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WEST COAST LUMBER

whatever the job, consider WOOD FIRST!

Architect Harold W. Burton used custom-made Ceramic Veneer to achieve this handsome entrance to the Church of Jesus Christ of Latter-Day Saints in West Los Angeles. The textured C. V. squares were fired with a gold overlay. This material (shown in detail above) was combined with harmonizing green veneer.

top architects agree:

Let's face it...with CV*

Ceramic Veneer opens the door to fresh design concepts. This versatile clay material can be glazed, fired and custom-fitted to the architect's specifications. It affords wide design latitude—an almost unlimited choice of color, shape and scale.

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These are reasons top architects agree: "Let's face it . . . with C. V."

*Ceramic Veneer

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Kitchens can have both charm and convenience when you use Hermosa Clay Tile. Here decorative Hermosa wall tile is combined with a spacious Dura-Glaze tile deck—an easy-to-clean kitchen that never grows dull.

Thanks to Hermosa Clay Tile, this bathroom is as practical as it is beautiful. Cosmetics, medicines, even cigarettes, can't mar the Dura-Glaze tile lavatory and floor. Satin glaze Hermosa wall tile can be cleaned easily and quickly with a damp cloth.

BACKGROUND FOR MODERN LIVING

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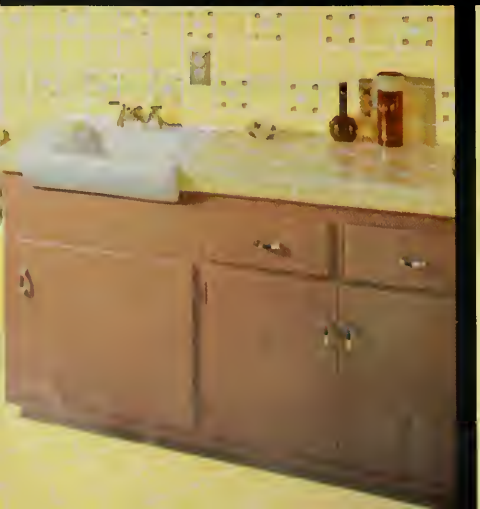

This smaller bath is equally luxurious. The decorative tile, one of many new designs in the Hermosa line, is keyed to rich, warm color.

Colorful tiles at right, Scotch Mist Gray (BH-183), Golden Yellow (BH-186), and Pink Dust (BH-187), were used to create the kitchen and bathrooms pictured on this page. Decorative tiles shown were created expressly for provincial homes.

Vol. 199 No. 2

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COVER PICTURE

SKY HARBOR

MUNICIPAL AIRPORT
Phoenix, Arizona

LESCHER & MAHONEY, A.I.A.
Architects

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View of field entrance, note treatment of spandrel above canopy of fluted aluminum. Same treatment of columns in entrance form semi-architreve for doors and frames.

Additional description and pictures on pages 20 and 21.

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. EDITORIAL NOTES .

FRINGE BENEFITS EXPENSIVE

Final reports from more than nine-hundred companies throughout the nation reveal that fringe benefit costs amounted to $720 per employee during 1953, and that these employer costs involving the payments for social security, pensions, and vacations were $76 per employee higher than two years ago.

Fringe payments varied widely among the firms reporting; from less than 5 per cent to more than 55 per cent of payroll, with the average payment 19.2 per cent of payroll, or 34.6 cents per payroll hour. Highest payments were by companies in the northeast, followed by the east north central, southeastern and western regions.

In the majority of instances, fringe payments are higher in the larger companies and lower in the smaller firms.

Broken down into segments the payments for legal requirements have remained about the same, while the payments for pensions and other agreed upon payments has risen considerably. Other increases are noted in payments for rest periods and lunch periods, and rapidly increasing is the payment for time not worked. Profit sharing payments and bonuses remain about the same.

The cost of fringe benefit payments runs into billions and billions annually and in the final analysis who pays them—YOU.

* *

Critics of a profession who do not have a fair understanding of that profession cannot tell whether they are criticizing because of theory or reality—and the same dilemma arises if the critic does not know what are his ethical rights.

* *

TRAFFIC SOLUTION

No community has to put up with the traffic problem at its worst, unless the powers-that-be so choose. Practical remedies are available, many of them are quite simple and relatively inexpensive.

The main challenge today in handling traffic is to extract the fullest potential capacity from the facilities that exist; as in most instances any greatly accelerated program of traffic rehabilitation would require many years and great sums of money.

Scientific determination of traffic needs and the use of skilled traffic engineering techniques to meet them, plus a sincere effort on the part of many governmental officials to consider traffic problem solution in the light of public service, will be the answer to many an acute traffic situation.

Directional control of traffic by means of reversible lanes and one-way and reversible one-way streets; staggered work hours to reduce the peak transit load; co-ordination of traffic signals to enable traffic to proceed for prolonged distances without stopping and improved transit service between outlying areas and down-town congestion, are but a few of the practical means of obtaining increased traffic flow from present facilities.

Increasing "traffic" tickets, tow-aways, and such, will increase the city's income, but, will never solve the ever growing traffic problem.

* *

Through research, designers and builders of oil heating equipment now make available a maximum in comfort in ranch-type, split-level and other modern home plans requiring compact, space saving heating and year-around air conditioning equipment.

* *

ECONOMY BEGINS AT HOME

You don't have to have federal aid in order to get needed community facilities and improvements. This is shown repeatedly in accounts received from local sources telling of efforts by communities to "do for themselves" rather than depend upon federal handouts.

That communities can get adequate hospitals for themselves without Federal assistance is shown by recent happenings in Winston-Salem, North Carolina, and Sterling, Illinois.

In Winston-Salem the North Carolina Baptist Hospital is finishing a $3-million addition, which will provide 150 beds and four floors of auxiliary facilities.

Through the North Carolina Medical Care Commission a federal grant of $700,000 was offered for the project. The State Baptist Convention, however, opposed acceptance of this grant and offered to raise $700,000 in free will offerings from its 3,000 member churches throughout the state. This was in addition to $400,000 already promised by the convention.

With $1,100,000 of church funds pledged, the Hospital Trustees raised $2-million more in a quiet campaign over three years.

Construction was begun in the faith that all the money would be raised. It was raised, and the building now is in the last stages of completion. No federal or other governmental money was used. The project was financed entirely by the churches, industry, individuals and charitable foundations.

An addition to another community hospital is under construction where the project was started after voluntary contributions amounting to $975,000 had been pledged. Additional funds of $1,000,000 were obtained through a local municipal bond issue. Contracts are now being negotiated for completion of the work and it is expected to be finished by August of 1955. Again, no dependence upon federal aid, but instead, reliance upon local resources—both voluntary and tax.

With colorful CLAY BRICK *...inside or outside...* ONE WALL DOES IT ALL

ABOVE—Appleton & Wolfard, Architects have blended Clay Brick with the landscape in creating an ideal outdoor setting at Parkside Library.

AT LEFT—Inside, colorful Clay Brick scores again with an outstanding achievement in indirect lighting.

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Inside or Outside A CLAY BRICK WALL · · · BEST FINISH OF ALL

NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, presents the following program of exhibitions and events for the month of November.

EXHIBITIONS: Egyptian Art Objects and Jewelry from the pre-dynastic time to the Ptolemaic Rule; Prints by Elizabeth Ginno and Augusta Rathbone; Charles Sheeler Retrospective Exhibition of Paintings, drawing and photographs; Contemporary American Indian Painting, sponsored by the Department of the Interior and the Indian Defense Association of Northern California; and the 15th Annual Exhibition of the Society of Western Artists, featuring a large selection in oils, watercolors and sculpture.

SPECIAL EVENTS: Include Classes in the enjoyment of Art for adults and children; Seminars in the History of Art, the Painting Workshop, and special tours of the Museum.

SAN FRANCISCO MUSEUM OF ART

Exhibitions in the War Memorial, Civic Center, for this month include: Photographs, by William Garnett, Dick McGraw, and John Nesom; 29th Annual Exhibition of the San Francisco Women Artists; Primitivism and Modern Art; Paintings, by Southern California Artists; and Paintings, by Per Krohg.

Special events include Illustrated Lecture, Lecture Tours of the Museum, Discussions on subjects related to art; motion picture films, and classes for Children, Painting, Sketch Club, and Art for the Layman.

Museum is open daily.

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING, CIVIC CENTER

OLD HORSES IN PARIS
OIL
22 x 18¼ in.
By
PER KROHG

Included in the retrospective loan exhibition, under the patronage of the Embassy of Norway, Washington, D. C.

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A huge panel of fluted Architectural Porcelain Enamel Panels was specified to create an effect both unique and complementary to other materials used in the construction of the Newport Balboa Savings and Loan Association building. Here, the emphasis is decidedly on the modern. Yet Porcelain Enamel can be used with architecture of any period. For it is available in finishes ranging from semi-matte to highest reflective gloss and may be fabricated to any contour that steel will accept.

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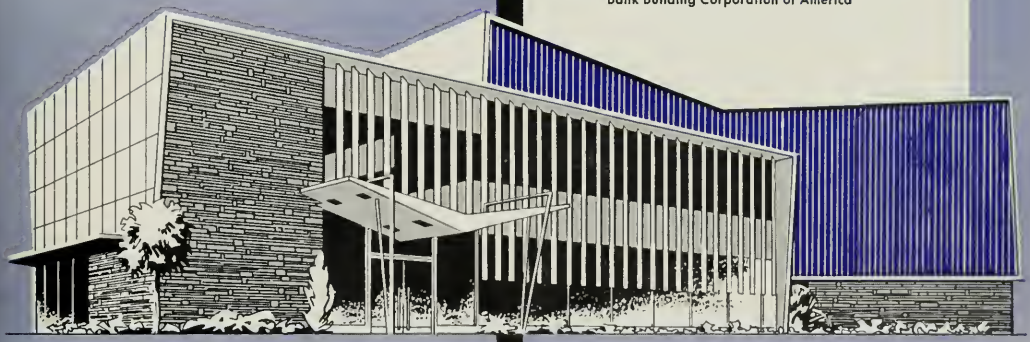

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THE ENTRANCE

OREGON REGIONAL THEME HOME

FOR MR. AND MRS. GORDON CAREY

McMinnville, Oregon

RICHARD SUNDELEAF, Architect

By ARTHUR W. PRIAULX

Another distinctive Oregon home with a definite regional theme has been designed for the Gordon Carey family of McMinnville by Architect Richard Sundeleaf of Portland. Native woods, especially west coast hemlock, were used in harmony with glass, brick and slate to develop a home that belongs to the northwest.

Large expanse of glass on the concealed portion of the home away from the street tie indoors and outdoors together, emphasizing in part the trend towards outdoor living. A rolling site, in the center of town, and sloping away from the street, was used to advantage to develop a maximum of privacy for the family. The home was located well up on the rim of

SLATE FLOORED, curved hall to bedrooms gives subtle feeling of seclusion to that more intimate portion of the home.

Stairwell to basement picks up natural light from planter windows.

the lot, near the street, so that most of the land area could be exploited for outdoor living and family use.

The problem was adaptation of the family's living needs to the available site, and also the solution of traffic problems within the home for a busy family of boys.

The structure nestles into the site, and few windows were installed on the street side. The lower elevation of the home boasts many full length windows and solid glass walls from ceiling to floor to take full advantage of the exquisite view of the large expanse of rolling lawns which are secluded from neighboring residences.

The clients preferred to have native materials used throughout their home where practical, so Architect Sundeleaf set out to design a home that would in truth be in the tradition of the Oregon country. Here is a home that fits the Oregon scene. It contains many features identified in recent years with the Oregon regional theme as well as some newer ideas developed by Architect Sundeleaf to better exploit native woods and other materials.

Hemlock was selected as the theme wood interior for this home because the warm, golden tones of this native northwest wood and its natural earth colorings contrast pleasantly with the brick, slate and liberal use of glass.

By retaining the natural texture and warm tones of this light-colored native wood, there is developed a definite feeling of affinity with the outdoors through-

THIS many doored entranceway solves difficult problem of traffic in this two-boy home.

Natural wood walls give the feeling of simplicity, friendliness and is attractive in looks.

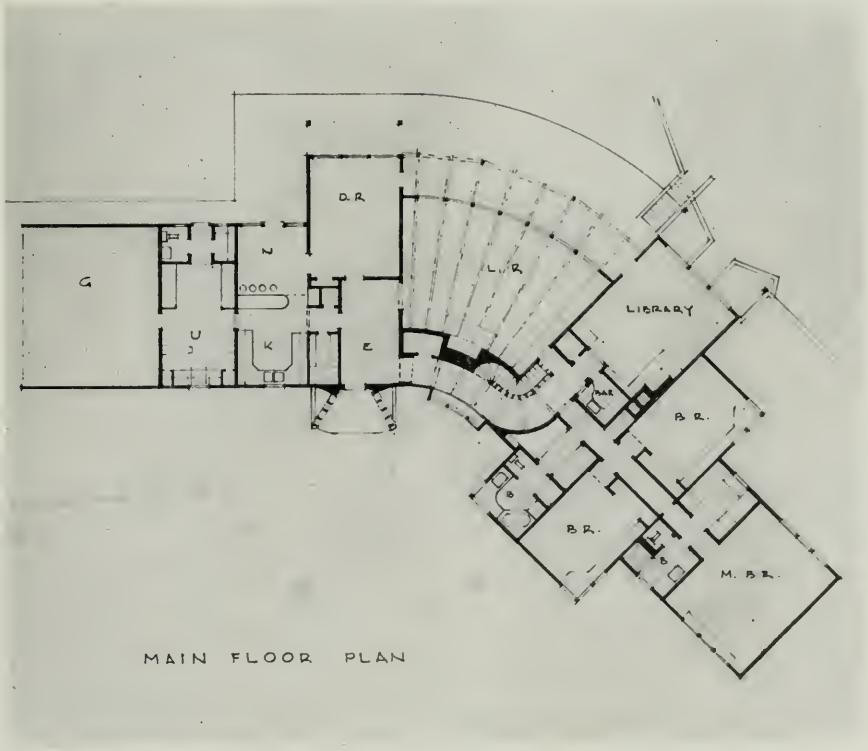
out this remarkable home. Sundeleaf has in effect brought a generous portion of the outdoors right back into the rooms. He has kept a nice balance between wood, brick, slate and glass, so that in no case is one overwhelmed with too large an area mass of any one material.

This is a split-level home, with lower level given over to lounging and play area, storage, heating system and laundry rooms. Living is all managed on the upper level.

Slate has been used at the outer entrance floor in pleasing contrast to the exterior siding. More highly polished slate flooring has been used in the inner hall entrance way, also in the hall extending around to the bedrooms and the same slate flooring in the den-music room. A curved hallway gives a degree of privacy to the bedroom areas. Hemlock paneling has been used throughout in the halls, living room, den-music room and in most of the bedrooms. Exposed beams have been used effectively in these rooms together with four-inch, tongue-and-groove hemlock matching lumber for ceilings.

The entranceway offers an excellent example of the solution of a traffic problem where two active boys are members of the family. Doors open directly into dining room, living room, kitchen and den from this hallway. Bedrooms are also reached by a short curved

PLAN



OREGON THEME HOME . . .

FULL WALLS of glass along inner elevation of home demonstrate in dramatic way the affinity of native materials of wood, brick and slate for the Oregon countryside.

This is the den-music room.

EXPOSED SPOKE-LIKE ceiling beams in this wood, brick, and glass walled living room give an unusual effect of largeness.

UNIQUE storage wall development is the men's wardrobe in master bedroom. Doors fit snugly and unnoticed into the panel wall section and hove full length mirrors.

Another view of Den-Music room shows compact music wall and small library for current books and magazines.

hall, Traffic congestion and cross traffic is reduced to a minimum.

The Carey home has a quiet richness about it without being ostentatious. This effect is gained, it appears, from a subtle blending of the native materials which have an inherent richness and quality when properly used.

The rooms appear to be much more spacious than they actually are. This illusion is attained by sim-

(See Page 27)

CONSTRUCTION PHASE—United States Products Corp. Warehouse

LOW COST POLE FRAME CONSTRUCTION APPEALS TO AGRICULTURAL INDUSTRY

By M. C. CONKEY,

Chief Structural Engineer, California Packing Corporation

History of Pole Frame Construction in California

Advantages and Cost

Technical Problems

ABOVE ILLUSTRATION: Shows Closs #2 Douglas Fir poles supporting two 2x10 D.F. girders on which rest 2x10 #1 D.F. purlins. Corrugated aluminum roofing will be nailed to purlins.

Pole frame construction came to the writer's attention in 1952 through reading advertisements in midwest farm publications.

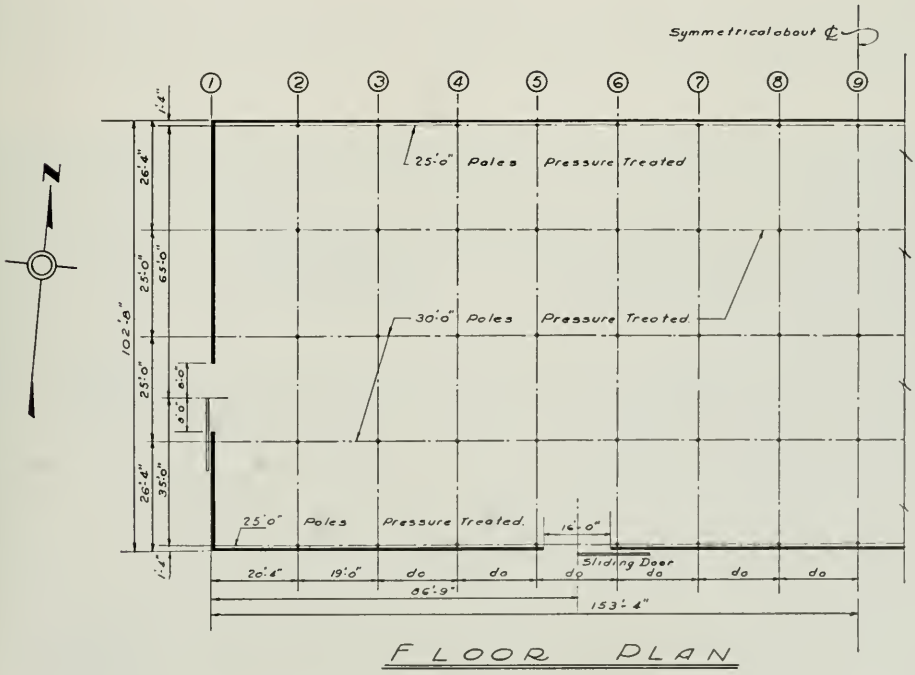
The advantages were so obvious and the solution so ideal for the California Packing Corporation requirements that no time was wasted in getting an installation under way.

The first project was at Hughson near Modesto. Mr. Ware, Consulting Engineer for the Stanislaus County Building Department, was most cooperative and issued a building permit in July, 1953, with no changes in the original design. It is believed that this was the first permit ever issued in California for an open-side pole-frame structural design.

The Hughson job proved so successful that four other projects were started in rapid succession. In addition, an enclosed processing building was constructed at Berryessa in Santa Clara County. As many features of design in this structure were not covered by the Santa Clara Building Code (Uniform Code) it was necessary to go before the Santa Clara Board of Appeals. At all times the members of the board, as well as Mr. Douglas Monchamp, Building Director, were sympathetic to the project, and in September, 1953, a permit was issued with only minor changes. It is believed that this was the first building permit ever issued for an enclosed pole-type building in California.

SHOWING erection of prefabricated wall section of United States Products Warehouse in San Jose, California. Walls were raised in 20 ft. sections by fork lift truck.

Angle iron secured top plates of wall to pole—studs were toe-nailed to foundation sill.



FLOOR PLAN

INSPECTION: Eugene Renner, District Manager, Building Products Division, Reynolds Metal Co., San Francisco (left); J. D. O'Brien, Field Engineer, Alfred Baxter, Vice-President, both of J. H. Baxter Co., San Francisco; and J. Stuart Hilliard, Pole Frame Construction Co., San Jose.

The publicity attending this Berryessa job started something of a pole-type building boom around San Jose. The largest structure built so far, and believed to be the largest in the United States, is a 30,000 sq. ft. warehouse for the United States Products Corp. cannery in San Jose, a subsidiary of Consolidated Grocers Corporation. (See illustrations.) Another recent large pole frame structure is a warehouse for the Rosenberg Dried Fruit Co., also in San Jose.

The economies inherent in this type of structure are many and obvious—so much so that it is amazing they have been overlooked so long in the West. All concrete foundations and lateral bracing are eliminated. In the case of the lug box sheds the elimination of all bracing was a must, as they are loaded from all four sides. These structures have a cost of approximately 65c per square foot. Substantial economies were made in the Berryessa job by eliminating all concrete except for 500 square feet of floor in the toilets and picking room. The large United Products warehouse cost in the neighborhood of $1.05 per square foot.

NEARING COMPLETION—Exterior of United States Products Corpn Warehouse; Size 307 feet by 103 feet; Eave Height, 20 feet; Construction included pressure treated poles with "Chemonite"; walls, 2 in. by 8 in. studs—3 feet on center; Roofing, .024 Corrugated Aluminum; Siding, .024 Aluminum; Sprinkler system on interior; Asphalt cement (4 inch) on rock base yard; Estimated cost $1.50 per square foot.

No technical difficulties of an unusual nature have yet been encountered. Basically, the structure resolves itself into a pressure-treated pole sunk in the ground. Vertical forces are carried by end bearing and skin friction, lateral forces by cantilever action of the pole.

On the Sacramento River where a lug box installation was recently completed, the holes filled up with muck and water and the sides caved in. The muck was cleaned out and some crushed rock dumped in the hole to stabilize the bottom. Poles were set and backfilled. Apparently, enough skin friction was developed to hold the poles, as the project was completed without incident. This has been the worst soil condition encountered to date.

The full utilization of pole construction has not yet been realized. Several interesting adaptations are now on the drafting boards, and the possibilities seem unlimited. For instance, the writer has designed a dry cleaning plant using a pole frame with concrete block and corrugated transite walls and roof. Another large industrial project contemplates driving the poles butt down to overcome a bad soil condition and increase the bearing capacity. Schools offer another interesting possibility as well as fairground structures.

WAREHOUSE IN OPERATION—Designed to store cased canned goods; Shows fork lift trucks stacking green pears which will ripen in the enclosure . . . an ideal methad of ripening since the variance of day and night temperature is small due to the thermal qualities of the aluminum roof and siding.

POLE FRAME Lug Box Storage Sheds erected at Hughson, California. Six sheds, each 47 feet by 105 feet; height, 17 feet at eaves; Eighteen Class 4 Chemonited Poles 25 feet long were buried 5 feet in the ground; Roof framing, 4 in. x 14 faat select structural Douglas Fir girders, 2 in. x 10 in. purlins; Roofing is .024 aluminum sheeting.

FRONT VIEW as seen from Via Lido street

ULTRA-MODERN
SAVINGS AND LOAN BUILDING

NEWPORT BAY, CALIFORNIA

To many, applying the term "ultra modern" to construction located in Southern California might seem over-obvious.

The recently completed Newport Balboa Savings and Loan Association building, however, located on Newport Bay, some 35 miles south of Los Angeles, can carry the description with dignity—inside and out.

Built by the Bank Building and Equipment Corporation of America, with headquarters in St. Louis, the building's modern exterior is matched by its streamlined and functional interior. Chief designer was Wenceslas Sarmiento who has created international award winning structures in this country and South America.

Basic construction is of concrete and steel. The foundations consist of 58 steel-and-concrete pilings sunk 22 feet into the ground. Concrete beams 30 inches high and 18 inches thick "float" on these pilings and support the entire structure. The roof is a four-inch reinforced concrete slab.

Exterior materials were chosen for beauty and ability to withstand salt air over the years. For the site is on the Bay's edge with the broad Pacific and rolling hills in the background.

Panels of fluted porcelain enamel, blue in color, were chosen for a large wall area that faces the Bay and a street known as Via Lido. This material was chosen because it is light in weight, extremely endur-

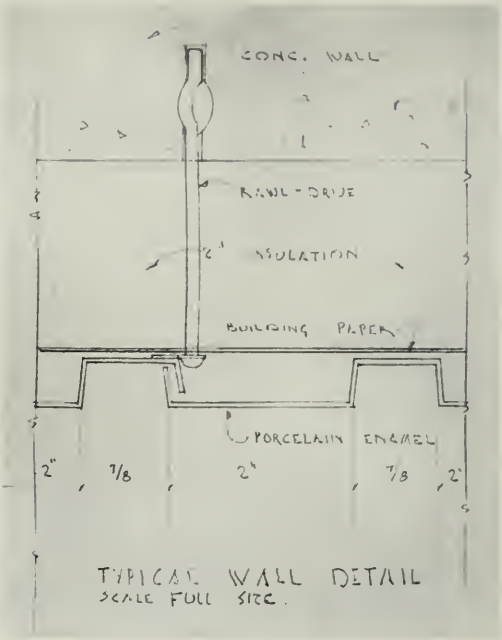
ing, and permits any desired color to be "locked in" so that newness and brilliance of shading may be retained for decades with only soap and water maintenance. This is accomplished by fusing porcelain enamel to steel by a special high temperature process. Since it is flexible, porcelain enamel on steel may be fabricated to any texture that steel itself will accept. It is possible to obtain porcelain enamel in finish textures ranging from highest gloss to semi-matte.

More than 4,000 square feet of tinted glass were utilized in forming other walls of the building and provide a full view of the North Lido Channel section of the Bay. In the lobby a window-wall extends to a height of 25 feet and the longest section of the Bay side is 90 feet.

The front of the building features a two-story wall of Kaibab Sandstone, adjoined by a full glass wall that extends from the entrance-way to the other end of the frontal section. Vertical louvers of reinforced vermiculite concrete extend downward along this glass wall area. Each is suspended from the top and fixed in position to eliminate direct sun, yet permit a maximum of daylight. A unique, broad "V" canopy shields and enhances the main entrance-way.

The main wall material at the ends of the building is white concrete plaster over metal laths. The surface

(See Page 34)



VIEW of new building from "boy side".

CONTROL TOWER at SKY-HARBOR Municipal Airport Phoenix, Arizona

Over one million people actually use the airport annually for arrival and departure on planes; dining room, cocktail lounge, specialty shops and other purposes. The Skyship dining room and cacktail lounge have gained national recognition for design, comfort and utility.

LESCHER & MAHONEY, A.I.A.
Architects

T G K CONSTRUCTION COMPANY
Contractors

AIRPORT HOTEL

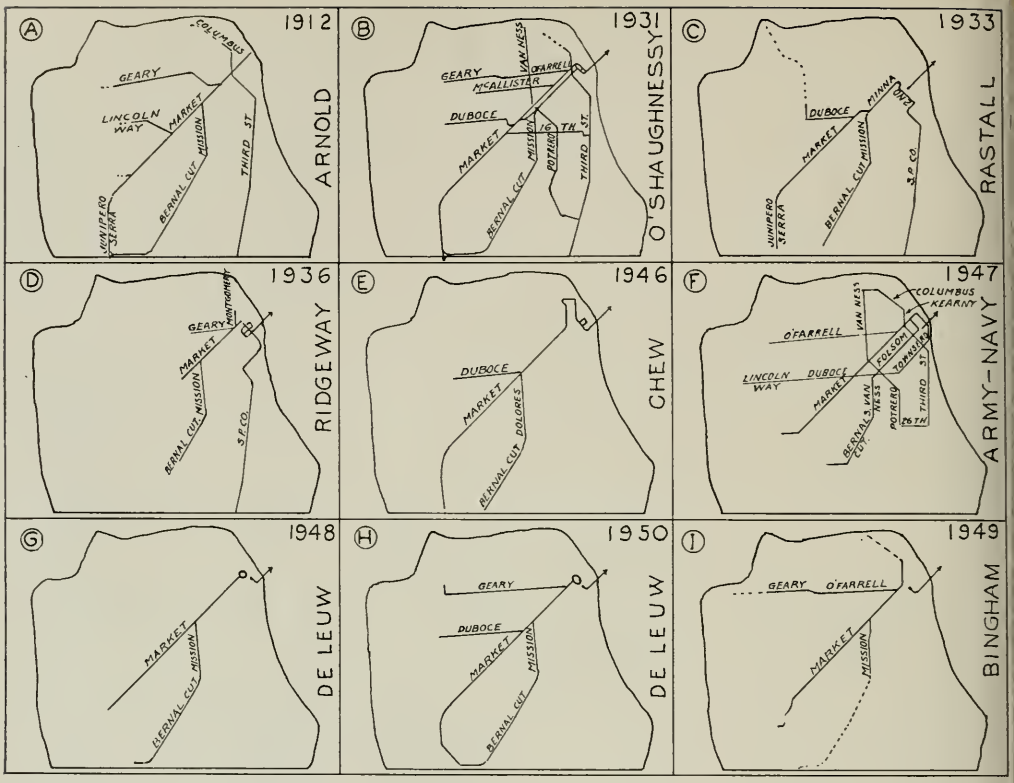
Constructed as an additional service to the traveling public and located adjacent to SKY-HARBOR, Phoenix, Arizona, Municipal Airport.

The project comprises forty-two rooms, a modern swimming pool, a group of conference rooms, and other hotel facilities.

Completed for occupancy November 1, 1954, by M. D. Brown Enterprises, Inc., Owners-Builders.

COST OF PROJECT

$350,000



VARIOUS TRAFFIC PLANS proposed for San Francisco

AN ENGINEERING VIEW OF THE RELATIONSHIP OF SAN FRANCISCO TO A BAY AREA TRANSIT SYSTEM

By GEORGE S. HILL, Consulting Engineer

Last January the writer presented an article, "A Plan for Bay Area Transit," and suggested certain changes in the Bay Bridge Terminal loop in order that the existing rail lines could be connected with an adequate distribution system in San Francisco. This can be done at small expense compared with that of building an entirely new rail crossing, and the California Toll Bridge Authority has the power to do this without additional legislation. Although the bridge is not designed for freight trains, recent developments indicate that a new type of passenger trains weighing only one fourth as much as those now in use, would make it possible for San Francisco to become the western terminus of coast to coast operations. The capital investment and operating costs per passenger seat are substantially lower than for conventional models. Standardization and mass production will reduce these still further. Two types of cars are being planned: one for main line operation including diners, baggage, mail, express and sleeping cars, using diesel or gas

turbine power; and the other for suburban and interurban commuter travel, adapted for use in subways with the doors equally spaced in the train and using electric power. These trains can be operated over 23 degree curves. The low slung nature of the cars makes high speed possible, especially on curves, with correspondingly faster schedules. On a recent test run between New York and Boston a speed of 110 miles per hour was attained. Any saving in time by the airlines is partly nullified by the distance to the airports and by uncertain weather conditions. Train operation is the safest means of travel now available.

TRAFFIC STUDIES EXPENSIVE

Many reports on transportation and city planning have been made and have cost San Francisco in excess of half a million dollars. Facetiously, these have been called the "five foot shelf of books," and reports "from Burnham to Bingham." One of the purposes of this article is to state the opinion of the writer that these reports should not be simply filed away and forgotten, but that by judicious selection of the best elements of each, a better plan would be evolved than could possibly be obtained otherwise.

The first San Francisco city planning report of note was made by Daniel H. Burnham of Chicago in 1905. Mr. Burnham was the author of city plans for Chicago, Manila, San Francisco and other cities. As to subways he stated: "Rapid underground transit solves the problem of moving large crowds from one center to another in a manner that no surface system can accomplish."

In 1929, Miller McClintock made a traffic survey of San Francisco and recommended a subway for Market Street as a means of relieving traffic conditions. Nearly all of the prominent men of the time enthusiastically endorsed the idea. An editorial in the San Francisco Chronicle of April 1, 1929, quotes many of them at length.

The figure shown at the start of this article is a series of thumb-nail sketches of rapid transit plans prepared by various engineers throughout the years. Reports dealing solely with surface transit, and various plans for the Bay Bridge Terminal have been excluded. Some of the sketches are for proposed first steps and others are for ultimate construction.

Sketch A.

Bion J. Arnold was the Chief Subway Engineer of the City of Chicago, a leading electrical engineer of his times and for many years a member of the Chicago Traction Board. He was consultant for the electrification of the New York Central Railroad into New York City in 1911. His "Report on Transportation Facilities for San Francisco," made in 1912, resulted in the location and construction of the Twin Peaks Tunnel and practically all of the street railway lines now remaining. He stated that extensive subway studies were hardly warranted at that time owing to the absence of very long hauls, especially if other recommended transit improvements were carried out, but that the following subway locations were clearly logical: Market Street subway connecting with Twin Peaks Tunnel; southern branch through the Mission District and Bernal Cut; Richmond branch preferably following McAllister Street, making use of Jefferson Park diagonally, and connecting with Point Lobos Avenue (now a part of Geary Street); Sunset branch from the Eureka Station to the northern part of the Sunset District; and a north and south line in Third and Kearny Streets and Columbus Avenue. Sketch A illustrates the principal suggestions, but omits the Ocean Shore and the Southern Pacific railroad rights of way through the Mission District, now non-existent, and also the Fillmore Street tunnel line to serve the 1915 exposition, as it was not constructed. The Arnold staff had the advice of former city engineers C. E. Grunsky and Marsden Manson.

Sketch B.

The report, "Rapid Transit Plans for the City of San Francisco," prepared by M. M. O'Shaughnessy in 1931 is well worth careful study, as it includes the considered opinions of one with long acquaintance with local conditions. M. M. O'Shaughnessy was the eminent city engineer of San Francisco who developed the Hetch-Hetchy water supply and built the Municipal Railway and the Twin Peaks and Duboce tunnels. The sketch shows the various lines proposed for the ultimate subway system. It was suggested that the first step should include only the Market Street line from First to Gough Street, the McAllister line to Hyde Street, and the O'Farrell Street line to Larkin Street, on the premise that the initial system would be used solely by the street cars. This was before most of the rail lines had been superseded by buses. Many of the statements in the report are prophetic and far-sighted, particularly those relating to parking and buses. The public and private systems had not yet been consolidated, and both bridges had been planned but not yet built.

Sketch C.

Dr. B. M. Rastall, director for Californians, Inc., for many years, was well acquainted with San Francisco conditions and his report to the San Francisco Chamber of Commerce, "San Francisco Bay Bridge Studies and Rapid Transit Problems," is notable in that he recommended a direct physical connection of the Bay Bridge rail line with a rapid transit system in San Francisco. This consisted of an elevated railway in a widened Minna Street connecting with future lines in Capp Street and through the Twin Peaks and Sunset tunnels. Stations were located at the Bay Bridge Terminal, between Fifth and Sixth,

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ENGINEERING LESSONS LEARNED FROM RECENT WEST COAST STRUCTURAL FAILURES

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA STUDY

Structural failures, and the lessons to be learned from them, were the basis of a highly provocative panel discussion at a recent meeting of the Structural Engineers Association of Southern California, held at the Rodger Young Auditorium. Nearly three hundred members and guests of the Association heard prominent speakers from throughout the State summarize the facts regarding four recent failures of structures, and then present their ideas as to the method and cause of the failure, and those precautions which must be taken to avoid similar situations in the future.

From the beginning of construction men have gained knowledge from failures. The famous Gothic Arch was largely developed through a series of successive failures and experiments before modern methods of analysis were available. Rare though failures may be today, a searching analysis of the causes helps prevent future similar disasters, and results in an ultimate benefit to clients and the general public.

WILLIAM T. WRIGHT
President, SEAOSC

Collapse of roof structures during the construction of two buildings (one at San Mateo, the other at Redwood City) was discussed by August E. Waegemann, San Francisco Consulting Engineer. The building at San Mateo involved tilt-up walls with poured columns supporting bow string trusses of 110 foot span at 20 feet on center. The trusses were connected to the columns with 1 anchor bolt, and it was subsequently found that reinforcing steel in the columns was approximately 14 inches short of the truss seat, resulting in an unreinforced portion at the top of the column. Prior to erection of the trusses, the wall panels were known to be out of line from ¾" to 1"; after the failure the walls were all within approximately ⅛" of being truly in line. Trusses were evidently erected and braced in a standard manner, and a subsequent check indicated that the design of the trusses was perfectly satisfactory. Roof joists were being placed when collapse of the structure occurred.

The difficulty of obtaining reliable information and eyewitness accounts to a failure of this type means that the remainder of the analysis must be by conjecture. We do know that five of the six trusses failed, and the known data regarding alignment of the tilt-up walls indicates that the walls were lined up after the trusses were erected and before the roof joists were placed, resulting in a "prestressed" bottom chord for at least some of the trusses. Approximately 1/3 of the joists were on the roof, and those on the roof appeared to be in groups of 30 to 40 members each. Conditions at the site indicate that if a crane were used to lift the bundles of joists to the roof, the crane operator would have been relying upon signals from a man on the roof to determine when to release the weight of his bundle on the roof system. A slight error could have resulted in dropping the load onto a pair of trusses, thus precipitating the failure.

The fact that all anchor bolts came loose from the top of the column, and that most of the column failures occurred at a point three to four inches above the last of the column reinforcing is indicative of high

stress which could have resulted from a combination of the prestressing effect due to alignment of the walls, and an impact load due to dropping of a bundle of roof joists—conditions not contemplated in the design of the trusses. It is possible that, if the column reinforcing had been properly designed and placed, even such an overload as evidently occurred might not have caused a collapse. It is extremely difficult in viewing the wreckage of a system of this kind to determine what failures occurred in the air, and what came about during the actual collapse onto the ground. If any of the trusses had been acting as compression struts for an area of the walls, a failure in another portion of the building destroying the integrity of the bottom chord bracing could have resulted in a lateral bending of the chord, and resulting failure at a net section, such as was indicated for at least one of the trusses.

Redwood City Incident

The building at Redwood City involved 12 inch concrete block side walls, with all cells filled solid, and four inch pipe columns embedded in the cells to receive the reactions of wood bowstring trusses. The contractor was behind schedule, and attempting to speed construction by having the trusses erected before completion of the walls. One side wall was completed, but the end portion of the other side had not been built up to its full length; and the front wall had been built to about four feet below the bottom chord level; and construction of the rear wall had not been started. Consequently, one truss seat adjacent to the rear wall had not been built, and at this location a ten foot excavation was still open. The contractor provided temporary support by using a 4x4 wood post twenty feet long, with 1x4 braces on two sides, and rested the post on a 3x12 plate and a pile of dirt about 3½ feet high. At the base of this pile of dirt in the excavation, there was about two feet of water.

With conditions such as this the truss company proceeded with erection of the trusses. With no possibility of providing bracing ties to either wall, 2x10 "A" frames were erected to stakes set in the ground. The contractor then proceeded to place ceiling joists on the bottom chord of the trusses, and had started placing his roof joists. Approximately ½ of the roof joists had been placed on the end span with the questionable support when failure occurred.

Conjecture from this point indicates that the loading of the joists had set up a continuing vibration. Such a vibration would have caused the plate and mound of earth supporting the 20 foot long 4x4 to shift, and allowed the post to drop into the mud below. With support removed from one end of the rear truss, collapse of the remainder of the system was, of course, imminent.

San Mateo Failure

Lift slab failure at San Mateo was analyzed by Oliver G. Bowen, Los Angeles Structural Engineer and currently the West Coast Consultant for the U. S. Lift Slab Corporation. The failure on this 125,000 square foot project occurred July 15, 1954, during the first of eleven proposed sections of lifting. The lift had been started on the night of the 14th, and completed to a height of seven feet; the next morning the lift was continued to over fifteen feet. Many spectators on the job in the morning fortunately left towards noon, and around eleven in the morning the columns were found to be three inches out of plumb to the east. Consequently, bracing was added in the form of cables from the top of one column to the base of another to pull the slab back into line; however, no bracing was added to prevent similar movement to the west. The leveling operation was resumed at 12:35 and the slab fell at 12:40.

Subsequent investigation by Mr. Bowen indicated several factors causing the failure. Primarily the six inch pipes used for columns on the job were found to have a factor of safety of one or less against buckling. Base plates used were of two sizes: 10x10x¾ with ¾" anchor bolts, and 8x8x½ with ½" anchor bolts. Mr. Bowen estimates they all should have been 11x11x⅞ with four ⅞" anchor bolts.

Failure, of course, occurred to the west in the unguyed direction, and resulted from the bending of the pipe columns through their excessive unsupported height. Some of the ¾" anchor bolts held, while all the ½" anchor bolts broke off. The base plate came welded to the bottom of the columns, and construction proceeded from a previously set leveling plate. Concrete was found between the base plate and the leveling plate, and Mr. Bowen indicated the use of leveling plates was not recommended. In addition the collars used to connect the slab to the pipe columns were made with a ¾" clear gap which allowed excessive wobbling of the connection.

Radio Tower Failure

John Minasian, Pasadena Structural Engineer, spoke on the failure of the 826 foot guyed tower for Station KHQ, Spokane, Washington, in October of 1950. The tower was designed for a 30 pound per square foot wind load on a tributary of 1½ times the area of the exposed framework, or 20% seismic. Material is proportioned for lateral loads, dead loads and guy loads. The 826 foot height was determined so that the tower would be exactly ½ wave length for the station, and in addition was designed to support future television equipment at the top. The addition of this equipment required the use of a third set of permanent guys. The tower was built of three 5" solid rods arranged

at the points of a triangle of side equal to six foot three inches. Bracing was provided on all sides between the rods, and sections were fabricated by welding into approximately 20 foot lengths for erection. Field connections of these sections were made by means of flanged connections, with from four to six bolts per connection. Three "Deadmen" approximately 600 feet from the base were provided, and permanent connections are made to them with strand cable guys prestressed to 1/8 of their breaking strength. Under design lateral loads, the guys are stressed to 1/4 of their breaking strength, leaving an ample factor of safety.

Prior to failure, erection had proceeded to approximately the 600 foot level. One inch round guys with a breaking strength of 22,000 lbs. had been installed at the 300 foot level, and a set of temporary guys had been installed at the 495 foot level. Permanent 1 1/2 guys with a breaking strength of 276,000 pounds were in the process of being installed at the 590 foot level. It was a quiet day, with practically no wind, and two of the guys had been tightened. Pulling was in the process for the third one, when failure occurred.

Subsequent calculations indicated that the tower must have been out of plumb approximately 7 1/2 feet, resulting in excessive cantilever moments on the bolted connections between the 20 foot sections. The tower "jackknifed" as a result of failure at the 300 foot level, though cables held in their sockets, and the foundations were satisfactory. Erection of the tower was neither supervised by the designer, nor performed by the fabricator.

Subsequently this tower was rebuilt as originally designed, and by the same construction crew. It is standing today, a safe structure, due to the greater care taken to maintain careful control during the second erection.

Naval Base Failure

William J. Bobisch, Structural Engineer and Director of Design for the 11th Naval District, spoke on the recent failure of a 2 hinged reinforced concrete frame in a subsistence building under construction at the Naval Amphibious Base, Coronado, California. The frames had a 70 foot span measured out to out of the building, and approximately sixteen frames at twenty foot centers had been erected. The concrete was approximately three months old at the time of erection, but subsequent investigation indicated it had not reached its specified strength in at least some of the bents. Precast roof panels had been placed over the center portion of the frame in question on a Friday afternoon, and no work done the following Saturday. Failure of the bent occurred that Saturday evening when fortunately no workmen were in the area. An area in the knee of the frame was completely unreinforced, and as the cracking began to open up, compression guys gave way resulting in an acceleration of the bent towards the outside of the building, as is evidenced by the stacked relation of roof panels on the ground after failure.

A complete investigation was made independently by Murray Erick and Associates at the request of the Navy. A failure to observe certain fundamentals of structural engineering resulted in an area of pure tension in concrete. The fact that other bents did not fail comes from the ability of the material to take some tension, and had the particular concrete in the bent that did fail not been far below specification strength, it is possible that the weakness of the bents might not have come to light until a later and more unfortunate time.

It was the intention of the design to splice 1 1/4" reinforced bars at the top of the frame column by means of a 2 1/2 foot lapped splice. Scale was not observed on the working drawing, and though the intention was to mesh the lapping bars side by side, there was insufficient width in the bent to allow this to take place. Bars were placed in the structure as schematically indicated on both the working drawing and the placing diagram, which resulted in the four 1 1/4" steel reinforcing bars bending down from the top of the beam at a point inside of five 1 1/4" outside column steel bars—the intermediate area being completely unreinforced. Failure occurred at this point, and the impression of the bent bars could be seen on the failure surface.

As a check on the condition, and in an effort to gain further knowledge, a second bent in this structure was tested by the Navy to destruction. Boxes were suspended uniformly along the length of the structure and filled with water during a three hour test period. Movies were taken of this test, and showed vividly the failure of the test structure in exactly the same manner as the original bent. The Navy Department was, of course, forced to have the remaining bents removed and new ones designed and installed.

Additional comments were made by Ed Martin, of the firm of A. C. Martin & Associates, designers of the structure. It was agreed that great care must be taken to insure that men in the field will be able to determine exactly how the designer of a structure intends that it should be built. On the particular job in question, Mr. Martin pointed out that other difficulties had been noted. Their office had been concerned only with the final condition of the bents in place, and had specified no particular erection sequence. However, they had called for drawings and calculation to be submitted to them for review prior to lifting of the bents, so that all contractors would be free to

use their particular equipment to the best advantage. However, it was not until five bents had been broken in attempts to erect them, that the contractor contacted Mr. Martin's office with the statement, "They can't be lifted!"

Members and guests of the Structural Engineers Association most certainly benefited from the evening's discussions. Many ideas were presented to them, and a lifetime of experience passed in review. Basically an adequate engineering design, coupled with clear drawings to indicate unmistakably the manner in which the structure is intended to be built should form a partnership with field supervision by the designing engineer to insure proper structures which are a credit to the Engineering Profession and the Construction Industry as well.

AMERICAN IRON AND STEEL INSTITUTE REGIONAL MEET

The American Iron and Steel Institute held its annual Regional Technical Meeting in San Francisco this month.

H. H. Fuller, president of Bethlehem Pacific Coast Steel Corporation, presided at the morning sessions which took under consideration the subjects of, "The Steel Industry and the Institute," discussion by Max D. Howell, executive vice president, American Iron and Steel Institute; "Basic Research and Tomorrow's Technology," Dr. L. A. DuBridge, president, California Institute of Technology; and "Men, Steel and Earthquakes," a twenty-seven minute color and sound film produced by the Bethlehem Pacific Coast Steel Corporation.

The afternoon sessions were presided over by Alden G. Roach, president, Columbia-Geneva Division, U.S. Steel Corporation and included discussions on the subjects of: "Trends in Earthquake Resistance Design," by R. W. Binder, Chief Engineer, Fabricated Structural Steel Division, Bethlehem Pacific Coast Steel Corporation; "Practical Approach to Air Control," by J. H. Smith, Technical Engineer, Air Control and Research, Kaiser Steel Corporation; "Application of Statistical Analyses for Quality Control in Steel Mills," by H. F. Myers, Metallurgical Engineer, Research and Development, Columbia-Geneva Steel Division, U. S. Steel Corporation; and "Saftey Programs as Stepping Stones to Better Human Relations," by Rudolph Smith, Works Manager, The Colorado Fuel and Iron Corporation.

OREGON THEME HOME

(From Page 13)

plicity of lines and the careful utilization of beams to lengthen the rooms. There is no lost space. Walls have been utilized wherever possible for storage. Probably the most interesting use of storage walls is in the master bedroom. A concealed wardrobe for the man of the house, saves floor space, gives compact storage, eliminates movable furniture, is out of the way when not in use behind well-fitted panel doors of hemlock to match the rest of the wall. The dressing room for the lady is lovely in its sheer simplicity and occupies a small space off the hall and separate from the bedroom.

Another interesting storage device is the concealed buffet in the dining room which occupies a short wall between two doorways. The dining room is also hemlock paneled and the matching doors which conceal the buffet are latched with a touch lock.

The living room is most interesting. The fireplace toward the center of the home has been built on a curve to match the curve in the stairwell to the basement. To carry out the theme of the curve and break the straight lines of conventional rooms, the exposed beams, which rest on the full height fireplace wall on one end, radiate out in spoke fashion to the outer extremes of the room. The effect is intriguing.

Another clever storage wall invention in this home is this concealed buffet. Small space it occupies is between two doorways; normally valueless bit of wall.

The den has a casual air, extenuated by the slate floor and the soft, friendly tones of the natural hemlock. An interesting feature of this room is the music wall which contains a built-in radio and hi-fidelity system. A compact bookcase and magazine rack have been installed above this music installation. Ample record storage and files are provided in cabinets around the radio and hi-fidelity systems.

There are two boys in the Carey family and the final selection of hemlock for the paneling material throughout the home was prompted by the anticipated wear-and-tear a growing family of boys and their guests would give a home. We believe Architetc Sundeleaf has gotten the most out of the available space.

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Montana Chapter:
E. Edward Scowcroft, President (Billings); J. Van Teylingen, Vice-President (Great Falls); H. C. Cheever, Secretary-Treasurer. Secretary office, Bozeman.

Nevada Chapter:
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Nevada State Board of Architects:
Russell Mills, Chairman, Reno; Aloysius MacDonald, Secretary, Las Vegas; Edward Parsons, L. A. Ferris, Reno, and Richard Stadleman, Los Vegas, Members. Office, 309 S. 5th St., Las Vegas.

Northern California Chapter:
Wendell R. Spackman, President; Wayne S. Hertzka, Vice-President; Leffler Miller, Secretary; Bernard J. Sabaroff, Treasurer. Directors, William Corlett, Wm. Stephen Allen, and Robert Kitchen; and Donn Emmons, Council Delegate. May B. Hipshman, Ex-Secy, 26 O'Farrell St., San Francisco.

PASADENA CHAPTER

Jack Lipman, A.I.A. was the principal speaker at the November meeting, showing colored slides taken during a recent trip through the Far East where stops were made in Japan, Korea, China, and Bangkok.

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INDIANAPOLIS HOME SHOW HOLDS ARCHITECTURAL CONTEST

Architects, architectural designrs, draftsmen, and students in recognized schools of architecture throughout the U. S. and abroad are invited to participate in the 1955 Architectural Competition sponsored by the Indianapolis Home Show, Inc., according to J. Frank Cantwell, managing director.

A group of selected designs submitted by contestants will be published in book form. Cash awards ranging from $25.00 to $500.00 are presented to the contestants whose designs best suit environment and climatic conditions.

The jury making the selection comprises Clair W. Ditchy, F.A.I.A., president A.I.A., chairman; C. Eugene Hamilton, A.I.A., president Indiana Society of Architects; Richard K. Zimmerly, A.I.A.; Paul R. Pike, builder; and O. C. Winters, builder. Contest details may be obtained from Home Show offices 1456 N. Delaware St., Indianapolis 2.

ARCHITECT NEUTRA HONORED

Richard J. Neutra, A.I.A. Architect, of the firm of Richard J. Neutra and Robert E. Alexander, has been notified that the Berlin Senate has awarded him, through the Technical University of Berlin, an honorary doctor's degree of technnical sciences. Neutra has been invited by the German Government to inspect the German building progress in housing and city planning.

Orange County Chapter:
Philmer J. Ellerbroek, President; John A. Nordbak, Vice-President; Chas. A. Hunter, Treasurer; Gates W. Burrows, Secretary. Directors: Everett E. Parks, Chas. A. Hunter and Everett L. Child. Chapter office 1606 Bust St., Santa Ana.

Oregon Chapter:
Holman J. Barnes, President; Albert W. Hilgers, Vice-President; Donald W. Edmundson, Secretary; DeWitt C. Robinson, Treasurer, and H. Abbott Lawrence, Trustee. Office of Secretary, 328 Henry Bldg., Portland.

Pasadena Chapter:
Wallace C. Bonsall, President; Henry C. Burge, Vice-President; George A. Schaffer, Secretary; Robert S. Cook, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Victor L. Wulff, President; Richard L. Pinnell, Vice-President; Edward G. Holliday, Secretary; Delmar S. Mitchell, Treasurer. Directors, Donald Campbell, Jack R. Lewis and Louis A. Dean. Sec'y Office, 4862 Baundary St., San Diego.

San Joaquin Chapter:
John F. Miller (Fresno), President; Byron C. Brodrick (Fresno), Vice-President; Allen Y. Lew (Fresno), Secretary; Lloyd J. Fletcher (Visalia), Treasurer. Directors, Wm. G. Hyberg, Robert C. Kaestner, Maurice J. Metz. Sec. Office, Fulton-Fresno Bldg., Fresno.

Santa Barbara Chapter:
Lewis A. Storrs, President; Lutah Maria Riggs, Vice-President; Robert Ingle Hoyt, Secretary; Roy W. Cheesman, Treas. Corresponding Secretary: F. Raymond Ford, 238 La Marina, Santa Barbara.

Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
Nelson I. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Robert H. Wohleb, 2nd Vice-President; Gordon N. Johnson, Secretary; Robert A. Parker, Treasurer. Directors: Silas E. Nelson, Lyle N. Swedberg.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
John S. Detlie, President; Ralf E. Decker, 1st Vice-President; Edwin T. Turner, 2nd Vice-President; Wendell H. Lovett, Secretary; Arnold G. Gangnes, Treas. Directors Paul Thiry, William J. Bain, J. Emil Anderson and Robert B. Price. Dayis Holcomb, Ex-Sec., 409 Central Bldg., Seattle 4.

Spokane Chapter:
Tom Adkinson, President; Carroll Martel, Vice-President; Harry Weller, 2nd Vice-President; William James, Secretary; Lawrence Evanoff, Treasurer. Office of the Secretary, W. 524 - 4th Ave., Spokane.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

CALIFORNIA COUNCIL OF ARCHITECTS
Malcolm Reynolds, President; Henry L. Wright, Vice-President; George Lind, Secretary; John Bomberger, Treasurer. Miss Rhoda Monks, Office Secretary, Offices, 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BOARD ARCHITECTURAL EXAMINERS:
George P. Simonds (Oakland), President; Ulysses Floyd Rible (Los Angeles), Secretary; Earl T. Heitschmidt (Los Angeles); C. J. Paderewski (San Diego); Norman K. Blanchard (San Francisco). Exec. Secy., Robert K. Kelley, Room 712, 145 S. Spring St., Los Angeles; San Francisco Office, Room 300, 507 Polk Street.

ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

AMERICAN INSTITUTE OF ARCHITECTS HONORS SIX

Six northern California architects received national honor awards recently from The American Institute of Architects, national professional organization of the architects.

Receiving the awards were: Anshen & Allen; John Lyon Reid and partners; Michael Goodman, Berkeley; George A. Downs; Ernest J. Kump, James D. Fessenden, and D. W. Johnson Associates; and Stone & Mulloy, Marraccini and Patterson partner associates.

CENTRAL COMMITTEE WOMENS ARCHITECTURAL LEAGUE

Mrs. Herman Light of Los Angeles was elected chairman of the Committee for 1955, at the annual conference of W.A.L. groups at the recent California Council of Architects convention in Lake County.

Mrs. A. C. Zimmerman of Pasadena, was named Secretary-Treasurer.

WEST COAST ARTISTS WIN ARCHITECTURAL COMMISSION

Architects Sidney Eisenshtat, A.I.A., of Los Angeles, recently announced that Sculptor Bernard Rosenthal and mosaic muralist Joe Young have been selected by the building committee of the Temple Emanuel in Beverly Hills, to design and execute the architectural art that will be employed in the new $850,000 Temple soon to be built.

Reflecting the modern form and traditional content of Temple Emanuel will be a "symbols of faith" bronze mural 25 feet high and 20 feet wide on the outer wall, and a pair of bronze lions will be used on the holy ark doors of the sanctuary.

NORTHERN CALIFORNIA CHAPTER

A special committee has been appointed to study projects in the San Francisco-Oakland Bay Area on which joint action of the Northern California Chapter and the East Bay Chapter could be taken. Such a joint action would in many instances serve to the advantage of architects on both sides of the Bay.

Mayor Elmer E. Robinson of San Francisco has appointed Ernest Born chairman of a newly formed Architectural Sub-Committee of the San Francisco Forward Committee. Serving with Born are Otto Hintermann, William Mooser, Sr., Frederick Reimers, and Charles Strothoff.

NEW REGIONAL COUNCIL OF ARCHITECTS IS FORMED

The California-Nevada-Hawaii Regional Council of The American Institute of Architects is the newest architectural organization to be established on the West Coast.

Purposes and objectives of the Council, as announced by Donald Beach Kirby, A.I.A., Regional Director, at the recent annual meeting of the California Council of Architects, are to formulate plans for regional operations of the Institute; to coordinate policies and procedures of the Institute among all of the Chapters in the area involved; to nominate and serve in an advisory capacity to, the Regional Director; to promote close working arrangements and strengthen the bonds between Chapters, state organizations, the Regional Director and the Board of Directors of the A.I.A.

Each Chapter in the Sierra-Nevada District will have a representative on the new Council.

WITH THE ENGINEERS

Structural Engineers Association of California

Harold P. King, President, Sherman Oaks; M. A. Ewing, Vice-President, Sacramento; Joseph Sheffet, Sec.-Treas., Hollywood. Directors, Ben Benloff, Ernest D. Francis, John J. Gould, L. W. Graham, G. A. Sedgwick, and W. T. Wheeler. Secretary's Office, 844 Seward St., Hollywood 38.

Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vive-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

W. S. Wassum, President; Charles M. Herd, Vice-President; J. F. Meehan, Sec-Treas, Directors: L. G. Amundsen, M. A. Ewing, Chas. M. Herd, R. F. Silberstein and W. S. Wassum. Office Sec. 68 Aiken Way, Sacramento, Calif.

American Society of Civil Engineers Los Angeles Section

Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

AMERICAN SOCIETY OF CIVIL ENGINEERS

William Roy Glidden of Richmond, Assistant Chief Engineer of the Virginia Department of Highways, was elected president of the American Society of Civil Engineers at the recent annual convention of the 102-year-old Society. He succeeded Daniel V. Terrell of Lexington, Dean of Engineering at the University of Kentucky.

Others installed included: Frank L. Weaver, of Washington, D. C., and Louis R. Howson, of Chicago, vice presidents. New directors are Don M. Corbett, Washington, D. C.; Jewell M. Garrelts, New York City; Frederick H. Paulson, Providence, R. I.; George S. Richardson, Pittsburgh; Graham P. Willoughby, Birmingham, and Lawrence A. Elsener, San Francisco.

New honorary members are Robert J. Cummins, of Houston, Texas; Shortridge Hardesty of New York City, and Edward P. Lupfer of Buffalo, New York.

Among awards for outstanding technical papers, winners included A. Warren Simonds of Denver, Structural Engineer, U. S. Bureau of Reclamation; Vaughan E. Hansen, Associate Professor of Irrigation Engineering, Utah State Agricultural College; Jerome M. Raphael, Associate Professor of Civil Engineering, University of California; Julian Hinds of Santa Paula, California, General Manager and Chief Engineer, United Water Conservation District.

Gunnar Sigurdsson, of Iceland, recent graduate of the Georgia Institute of Technology, was awarded the J. Waldo Smith Hydraulic Fellowship for graduate study in hydraulic engineering.

AMERICAN SOCIETY OF CIVIL ENGINEERS

The Structural Group of the Los Angeles ASCE, held a panel group discussion early this month on the subject "Present Day Teaching of Structural Engineering," with John K. Minasian serving as moderator.

Panel members included Prof. David M. Wilson, Prof. J. Morley English, Prof. George W. Housner, and Donald F. Shugart.

ENGINEERS URGED TO COMPETE FOR JOHN WOODMAN HIGGINS AWARD

Engineers were urged to submit their entries for the annual John Woodman Higgins Redesign Award before the closing date of December 31, 1954, according to a statement by Carter C. Higgins, president and general manager of Worcester Pressed Steel Company.

The new competition was established recently to honor the individual selected as having done original and outstanding redesign work in the field of metal stamping. A cash prize of $500 will be offered.

Entries should be sent to the John Woodman Higgins Redesign Award, Pressed Metal Institute, 2860 East 130th Street, Cleveland 20, Ohio.

The first Higgins award will be presented at the spring technical meeting of the Pressed Metal Institute in May, 1955. The presentation will be based on the following criteria: successful production by metal stamping for a part previously turned out by another metal working process; originality of design; and significant cost savings realized in the change-over to the metal stamping technique.

Nominations for the new annual award will be checked by the Technical Committee of the Pressed Metal Institute and judged by an awards committee composed of leading industrial editors and engineers.

Throughout his business career, John Woodman Higgins, whose name the award bears, has emphasized the savings inherent in forming and drawing sheet metal in quick-acting presses, and has supported many changeovers from other ways of making propeller noses, automotive parts, bearing separators, and numerous casings for typewriters.

He was instrumental in the incorporation of Worcester Pressed Steel Company in 1904 and was its president from 1912 until 1950. He is now chairman.

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of
Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Benioff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of
Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military
Puget Sound Engineering Council
(Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices. L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St. San Francisco 5.

Society of American Military
Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

SOCIETY OF AMERICAN MILITARY ENGINEERS, SAN FRANCISCO POST

"The Army is a Force in Peace" was the subject of a talk by General Matthew B. Ridgway, Chief of Staff, United States Army, at a joint meeting with the Commonwealth Club of California, at the Palace Hotel in San Francisco, November 5.

The San Francisco Chamber of Commerce, Bay Area Council and numerous Armed Forces organizations in Northern California participated in the program.

Responsible for planning and executing the first large-scale airborne assault in the history of the Army —the attack on Sicily, Ridgway led his division in its rapid conquest of the western half of that island.

On April 11, 1951, General Ridgway was appointed Supreme Commander for the Allied Powers, Commander-in-Chief of the United Nations Command in the Far East and Commander-in-Chief of the Far East Command in Japan, succeeding General of the Army, Douglas MacArthur. In addition to directing United Nations strategy and guiding the armistice negotiations in Korea, he supervised the final stages of the rebirth of the Japanese people as an independent nation.

In May 1952, General Ridgway was named Supreme Commander, Allied Powers, Europe, with headquarters at Paris, France, succeeding General of the Army Dwight D. Eisenhower.

On July 11, 1953, he relinquished his command as Supreme Commander, Allied Powers, Europe, and on 15 August 1953, was appointed Chief of Staff, United States Army.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

The November meeting was "a meeting with the Building Officials," and was well attended by city and county building officials of bay area municipalities. Taking part were engineers: Henry J. Degenkolb, Structural Engineer; John V. Schwafel, Building Inspector; Robert R. Matheu, Structural Engineer, and Richard Foraker, Building Inspector.

The nominating committee, Harry B. Corlett, chairman, William Brewer, Leslie Graham, Charles Herd, and Karl Steinbrugge announced the names of officers to be elected for the ensuing year.

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PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

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921 Larkin Street

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2833 Third Street

Secretary, John J. O'Connor
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306 Sharon Bldg.

Treasurer, Phillip F. Brown, Jr.
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No. 1 Beach Street

Edited by Andre R. Roegiers—ARCADIA METAL PRODUCTS

PRODUCERS COUNCIL PANEL DISCUSSION ON THE PROPOSED CHANGES FOR THE STATE BID LAW

Panel members shown above are, from left to right: John Cowley, The Brookman Co.; Carl Frank, Detroit Steel Products; Frank Corker, Manager, San Francisco Builders Exchange; Cliff Dorwin, Manager, Oakland Builders Exchange; Hal Reynolds, Moderator, Manager, California State Builders Exchange; Hal Waller, Truscon Steel Corp.; George Quamby, Detroit Steel Products; William Smith, Ceco Steel Products; Ned Gates, Bishop, Younger, Bradley; Leonard Tivol, A.I.A.; Fred Ashley, A.I.A.

Producers Council members and guests heard a very interesting panel discussion on the proposed changes for the state bid law. In introducing the panel members, Carl Frank and John Cowley, pointed out that the Producers Council would take no position with reference to the specific legislation under discussion. Hal Reynolds, exective vice president, California State Builders Exchange, led the discussion, pointing out that the present subcontractors' listing law was adopted by the State Legislature in 1941 for the purpose of discouraging the shopping of subcontractors' bids.

Proposed amendments would add the following provisions: 1) Subcontractors' bids would have to be in the hands of the general contractors 24 hours before the general bid opening time. 2) Copies of all subcontractors' bids would be filed with a neutral escrow agent. 3) Subcontractors' bids would be backed up by a bid bond and the contract for specialty construction work would be covered by a performance bond. After the explanation of the proposed legislation, a number of very pertinent questions were asked by members of the questioning panel headed by Hal Waller of Truscon Steel.

COMING EVENTS

Christmas Jinks, Terrace Room, Fairmont Hotel, on Thursday evening, December 2, 1954.

USE QUALITY PRODUCTS — THE PRODUCERS' COUNCIL — UNITED MANUFACTURERS OF QUALITY BUILDING PRODUCTS — CONSULT AN ARCHITECT

SCHOOL BONDS APPROVED

Voters of the Jefferson Union High School District, Daly City, San Mateo county, recently approved issuance of $1,600,000 in school bonds at a special election. Funds derived from the sale of the bonds are to be used in the construction of a new Westmoor High School Building and will include classrooms, administration facilities, two shops, cafeteria, gymnasium, and toilet rooms.

Mario J. Ciampi, San Francisco, is the architect.

COUNTY JAIL

Architects Butner, Holm & Waterman of Salinas, are completing plans for construction of a County Jail addition to the Monterey County Court House in Salinas.

The addition will be 1-story, reinforced concrete construction with steel cell blocks; a receiving office, visitors room, property room, and a holding tank.

Estimated cost of the project is $150,000.

LIBRARY BUILDING

Architect Wm. H. Rowe of San Francisco, has completed plans for construction of a new Library Building for the City of San Bruno.

Of reinforced concrete, aluminum sash, composition roof, concrete floors, and rubber tile floor, the new building will cost an estimated $110,000.

TWELVE STORY OFFICE

Archetices and engineers Adrian Wilson & Associates of Los Angeles are completing plans for construction of a 12-story, reinforced concrete office building at Temple and Figueroa streets in Los Angeles for themselves.

The building will contain 251,500 sq. ft. of office space, with three basements providing parking space for 200 automobiles. Air conditioning equipment will include smog elimination equipment.

Estimated cost of the project is $2,500,000.

STUDENT UNION

Architect Jerome Kasavan of Salinas, has completed drawings for the construction of a $100,000 Student Union building to be erected on the Hartnell Jr. College campus at Salinas.

Of frame and stucco construction the building will contain a cafeteria, kitchen, lounge area, and a group of meeting rooms.

JUSTICE COURT

The architectural firm of Rickey & Brooks of Sacramento, is completing drawings for the construction of a Justice Court Building in Fair Oaks for the Sacramento county board of supervisors.

The new structure will be 1-story and will cost an estimated $40,000.

HOSPITAL ADDITION

Architects White & Herman of San Francisco, have completed drawings for the construction of an addition to the Fairfield Hospital in Fairfield.

Of concrete block and frame construction, tar and gravel roof, wood floors, metal sash, and air conditioning, the additional facilities will be used as a Maternity Ward.

SCHOOL BONDS APPROVED

Voters of the Montalvin Elementary School (Pinole Union Elementary School District) Pinole, approved issuance of special school bonds for the purpose of constructing of new 8-classroom, plus kindergarten, administration facilities, and toilets elementary school building.

Architect Jack Buchter of Orinda is completing plans and specifications for the school which will be of frame and stucco construction.

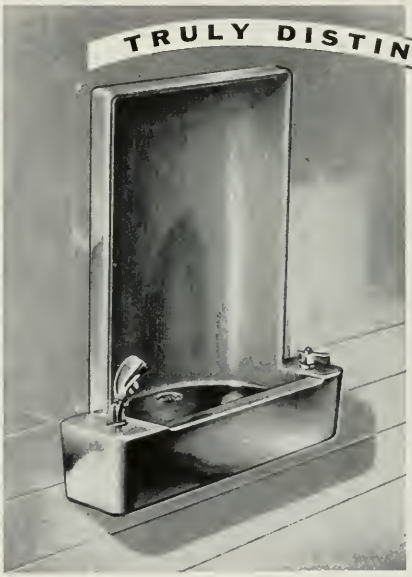
FEDERAL FUNDS FOR RICHMOND

The Richmond Elementary and High School District, Richmond, California, has been allocated $1,565,787 for the construction of a new Elementary School building in the City of Richmond, and $700,343 for the construction of a new Junior High School in the same city

BANK BUILDING

Engineer George Novikoff of Los Angeles, has completed drawings for construction of a 1-story and mezzanine, brick masonry bank building in Hawthorne for the Pacific State Bank.

The new bank will be 60 x 105 feet in area; composition roofing, tapered steel girders, wood joists, concrete slab, terrazzo and asphalt tile floors, plaster walls, acoustic tile ceilings, sliding aluminum windows, aluminum sliding doors, vault, toilets and metal toilet partitions, electrical work, corrugated plastic sign, adjustable metal louvers, and asphalt paving.



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PERSONALITIES

SLACK WINBURN, SR., A.I.A. ARCHITECT

Salt Lake City, Utah

Born in Lee's Summit, Missouri, about fifteen miles from Kansas City, he received his grammar school education in Oklahoma, and graduated from high school in Idaho Falls, Idaho. Was a practicing architect at the age of 20 and received his state certificate to practice in 1918 at the age of 21.

SLACK WINBURN, AIA
Architect

Was given the name "Slack," a family name of close friends of the Winburns in Missouri. Slack has been practicing architecture in Salt Lake City for 35 years and is associated with W. G. Knobbel, A.I.A., of St. Louis. A joint venture they recently developed for the First Security Bank of Utah was the 12 story, $2,500,000 office building now under construction in Salt Lake City.

Winburn has prepared plans for countless schools and the Men's Dormitory at the University of Utah, now under construction; six bank buildings, a city hall and library building and many other projects extending over Utah, Idaho, Wyoming and eastern Nevada.

He prepared plans for the new Sugar House Shopping Center in Salt Lake, which, when completed, will have 400,000 square feet and will cost $3,500,000, with parking facilities for 1000 cars.

He belongs to the Country Club, the Ambassador Club, and the A.I.A. of Salt Lake City. His son, David, holds two degrees in architecture from the University of Utah and is associated with his father. Another son, Slack, Jr., specialized in engineering at college and is a member of the firm of the Quinney-Winburn Construction Company of Salt Lake City.

One interesting comment about Mr. Winburn is that at Toulouse, France, while at the Ecole des Beaux Arts, his roommate was architect C. J. Ryland, now practicing in Monterey.

NEXT MONTH—Roy Drachman, Sub-divider, Real Estate Broker, Tucson, Arizona.

ULTRA MODERN SAVINGS & LOAN BUILDING

(From Page 19)

is deeply scored to form rectangular patterns and is finished with a weatherproof resin coating.

Interior wall areas are covered with heavy plasticized fabric, excepting the sandstone wall at the front which was left in its natural finish. Working floor space is covered with vinyl plastic tile. Textured carpeting covers much of the rest of the floor area. All washrooms are floored with terrazzo. Ceilings are of sound-absorbing plaster, cork and acoustic tile. Highly finished black walnut and mahogany were selected for all counters and fixtures. Interior lighting is fluorescent. Outside lighting is controlled by an "electric eye." Electronic coin sorters and a public address system to page employees and customers have been installed.

All customer services are centered in a "peninsula, surrounded on three sides" by the customer lobby. This central plan was designed so that all accounting machines and recording and file equipment would be at the fingertips of those who use them with as little lost motion as possible. A sundeck, full kitchen and staff lounge are located upstairs, with the sundeck being so constructed that it could in time to come be converted to working area.

The full air conditioning system basically uses steam for both heating and cooling. Warming air is filtered and then heated over steam filled coils. Cooling air is obtained by directing air over cold water coils, the cold water being provided by a modern unit which derives its heat source from steam. There are no openable windows in the building.

Now with one of the most modern banking establishments in the West, officials of the Newport Balboa Savings and Loan Association state that plans for the building were developed and re-developed over a period of seven years. Founded as recently as 1936, the Association serves an area that has grown in that time from a "summer resort" to a busy and thoroughly established Southern California residential community.

PICTURE CREDITS—Acknouledgment is given the following for photographs appearing in this issue: Ellis Boone, Cover: Photo Art Commercial, Pages 7, 8, 10, 11 (bottom); West Coast Lumbermen's Ass'n, Pages 11 (top), 27; J. H. Baxter Co., Pages 14, 15, 17; Tommy Simpson, Page 16 (top); Reynolds Metal Co., Page 16 (bottom); William J. Ralston, Page 20; Kawneer Co., Page 21; Herbert Bruce Cross, Pages 18, 19.

BAY AREA TRANSIT . . .

(From Page 23)

Eleventh and Twelfth, and at Duboce Avenue. The following quotations are from his report: "No single terminal station can give adequate convenience for the entire East Bay travel," and "Why not a two-station terminal?"

Sketch D.

Robert Ridgeway was chief subway engineer of the City of New York. Mr. Ridgway and his associate, Alfred Brahdy, were asked to preview rapid transit plans prepared by the Public Utilities Commission. Their report, "Initial Rapid Transit System for San Francisco," does not deviate from the plan of the Commission except to shorten the line through the Bernal Cut. Valuable suggestions were made as to details such as connecting the subway at the Bay Bridge Terminal with a line to the Southern Pacific Station, and disapproving the use of a subway terminal loop as an unnecessary expense. It was also recommended that new cars to be purchased should be designed especially for subway transportation and use.

Sketch E.

R. S. Chew is a San Francisco consulting structural engineer who favored the Telegraph Hill site for the Bay Bridge. Like Dr. Rastall he has in recent plans recommended a physical connection of the Bay Bridge with the rapid transit system in San Francisco. His plan shows a connection with the Bay Bridge Terminal loop as an elevated structure across Market Street and north on Battery Street to a station near Telegraph Hill returning as a subway to Market Street via Columbus Avenue and Kearny Street, and extending out Market Street to the tunnel lines. The branch southward from Market Street would be via Dolores Street.

Sketch F.

This is a system proposed by the Army-Navy Board and is readily identified as similar to Sketch B as proposed by M. M. O'Shaughnessy. The Army-Navy report recommended a tube under the Bay from Oakland Pier to Howard Street in San Francisco. The Oakland Pier is a natural bridge-head for main line trains from the north and from the south.

Sketches G and H.

DeLeuw Cather and Company, successors of Kelker DeLeuw and Company is a firm of consultants specializing in transportation and city planning. The firm has made subway plans for many cities including Chicago, Cleveland, Los Angeles, Toronto and others. Sketch G shows lines as proposed in the "Transportation Plan for San Francisco," issued in 1948, and Sketch H shows the lines as proposed in a report to the City Planning Commission entitled "A Subway and Rapid Transit System for San Francisco," issued in 1950, and transmitted with review and comments by Paul Opperman, director of planning, to Mayor Elmer E. Robinson.

Sketch I.

Colonel Sidney H. Bingham is Commissioner, Board of Transportation, City of New York. The sketch shows the lines proposed by him in his report to Mayor Robinson in 1949. He became convinced that a subway system is the best solution to the city's mass transportation problems. He declared that San Francisco's transit problem will not be solved by building express highways to funnel more and more cars into the limited downtown area. "The result of such a policy," he said, "will be to force commerce and industry to disperse so that their workers and customers can reach them in a reasonable time." The specific recommendations as to lines closely follow some of the earlier recommendations. He recommended the following order of construction: 1. Market-Twin Peaks Tunnel line. 2. Extension of the Market-Twin Peaks Tunnel route. 3. Market-Mission line. 4. O'Farrell-Geary line. Because of Colonel Bingham's close daily contact with transportation and its problems in the City of New York, his advice has high value. To visualize the San Francisco of tomorrow one has only to look at the New York and Chicago of today.

PLANS ARE SIMILAR

In comparing these various plans it is noted that they are similar in several respects. All recognize the necessity of including a Market-Twin Peaks Tunnel trunk line, and Market-Mission, Market-Richmond, and Market-Sunset branches. Several suggest a north-south line on Third, Kearny or Montgomery Streets, and Columbus Avenue. Two have suggested extending the Southern Pacific line to the Bay Bridge Terminal, and several have suggested lines such as Van Ness and Potrero Avenues, and Folsom and Townsend Streets for the distant future. Both Dr. Rastall and Mr. Chew recognize the desirability of through operation and a direct physical connection with the Bay Bridge rail line, although both resort to elevated lines to achieve this. Arnold, O'Shaughnessy and Ridgeway recommended against the use of elevated lines in the downtown area, and their construction is banned in New York City. The Chicago elevated loop is to be removed and replaced by through routed subways. Nearly all of the plans presented relate only to San Francisco, while the commuting radius, with San Francisco as the hub, comprises the entire Bay Area. San Francisco county is relatively small compared with the metropolitan area of which it is the center, but it should be prepared to take a leading part in any plans for an expanded rapid transit system to adjacent counties. Dr. Rastall raised the question as to the desirability of having two terminal stations, and this would appear to be a logical arrangement, with an uptown station at Twelfth Street for East Bay and Peninsula commuters' trains, and the Bay Bridge Ter-

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minal for the San Francisco lines. Thus, ample shuttle service would be provided for Market Street, with equipment fully utilized in both directions. Through operation would also be possible when warranted, and there could and should be complete interchangeability of use, even if this involves changes in existing legislation. These terminals are not within the central business district and should be considered more as storage yards and dispatching centers than as load points for passengers. With five other subway stops between the two, the commuters could reach their various destinations without difficulty. "Such East Bay commuters as use the street railway facilities of San Francisco, ride in a direction opposite to that of the peak load patrons living within the City." (O'Shaughnessy report.) To facilitate storage and interchange it is desirable to keep the trunk rail lines together. Arnold, O'Shaughnessy and Ridgeway recommended mezzanines over the tracks and platforms, and four tracks for the Market Street trunk line, although Ridgeway would build only two tracks for the first step, but advised against the use of downtown Mission Street. Bingham recommended four tracks for Market Street also. For the entire Bay Area at least four tracks would be required.

It has seemed to the writer that it would be of doubtful economy to construct subway branches north of Market Street in both O'Farrell (or Geary) and McAllister Streets, as suggested in the O'Shaughnessy report. The writer has held that Geary Street intersects Market Street too far downtown to conform with the idea of considering Market Street as an "elongated terminal," and misses such important load points as the Civic Center, the Seventh Street bus terminal and the Emporium. Outer Geary Street if projected straight, would intersect Market Street at Golden Gate Avenue. McAllister Street is favored, with a station at Van Ness Avenue. By the use of Jefferson Square diagonally as suggested in the Arnold report, it would be possible to proceed up the Hayes Valley with a satisfactory grade by the fill and cover method. In order to reach Geary Street without interfering with the redevelopment plans, it may be necessary to resort partly to tunnel construction. This route would have the advantage of bringing the traffic from the Golden Gate Bridge more directly into the heart of the city, with greater convenience to both the Fillmore and Mission districts.

Rerouting Railroads

The suggestion of Robert Ridgeway that the Southern Pacific line from the Peninsula be extended around south of Rincon Hill via Fremont Street to the Bay Bridge Terminal is well worth considering. The possibility of this connection is one of the factors which led to the choice of Plan X for the Bay Bridge Terminal. This is the basis for a plan which the writer proposes for a direct physical connection with the Bay

Bridge rail line as described in this magazine last January. By reconstructing a portion of the terminal loop, connections can be made at First Street both with the Peninsula lines and the San Francisco subway system, permitting three-way operation to and from the Peninsula, Oakland and the San Francisco business and retail centers. Instead of Fremont Street, the writer has utilized First Street which is the original shore line. As one of the requisites of a good plan is its adaptability to changed conditions, it is thought that this plan will provide for such contingencies as future Bay crossings at the foot of Van Ness Avenue, Telegraph Hill, the foot of Howard Street, or southerly. With the Peninsula connection in First Street, other north-south subways, except the Mission branch, would be unnecessary. It is necessary to recognize the fact that the railroads are a vital part of this nation's defense and mass transportation system and therefore should be coordinated with our road building program. Logical planning would indicate that highway grade separations and freeway construction programs should be deferred until the requirements for the rail lines are decided upon.

There is not the same necessity to bring main lines into the heart of the city that there is for the suburban trains. For the main line trains, the site of the Southern Pacific Station is the only one available without prohibitive cost, and also possessing the qualities of sufficient size and accessibility from the business center. The station could be of the through type and this would permit through operation of passenger trains from the Shasta and overland routes to the Coast line. By joint trackage use, the Santa Fe and Western Pacific Railroads could also use the station. For the commuter, a rapid transit line from the Peninsula would pass the station and proceed via First Street to the proposed subway in Market Street.

Subway Cost Estimates

The total cost of the initial subway system for the city of Chicago was estimated at about $75,000,000. Of this amount $64,000,000 covers basic construction of tubes, stations, and structures. The Federal Government contributed $25,967,000 towards this cost. The remainder is being paid for from the city's Traction and Transit fund, together with a small amount from the subway revenue bond fund of 1950. No direct taxes or special assessments have been levied for the construction of these two subways.

The following is quoted from an address by Mr. W. S. Douglas last May: "Here in San Francisco the lead has been taken in recognizing that there is economically speaking a point of diminishing return with respect to the improvement of facilities for the motor vehicle. Beyond that point, rights of way for thruways and the acres required for parking destroy the very values they are seeking to sustain. Land and construction costs mount beyond the economic worth created."

The Toronto subway has demonstrated its ability to restore the downtown area to its rightful position as the heart of the city. It has slowed down the flight to the suburbs. It has provided a positive rebuttal to those who urge that the provision of more facilities for the motor car is the only answer to traffic ills.

SEVENTH ANNUAL INDUSTRIAL ENGINEERING INSTITUTE

Plans for the seventh annual Industrial Engineering Institute have been announced at the University of California at Los Angeles by Joseph D. Carrabino, lecturer in Production Management, who will serve as general chairman of the conference.

Two sessions are scheduled to be held. The first on January 28-29 in Los Angeles, and the second on February 1, at UC campus in Berkeley.

The Institute is particularly designed to present new and important practical developments and applications in the field of industrial engineering and management. Joining in presentation of the program will be the Los Angeles and San Francisco chapters of The American Society of Mechanical Engineers; the Society for Advancement of Management; the American Institute of Industrial Engineers; American Society

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LEWIS P. HOBART, ARCHITECT, DIES

Lewis P. Hobart, 81, A.A.I.A., architect of Grace Cathedral in San Francisco, died at his San Francisco home following several years of failing health.

Prominent in the architectural profession for many years, he also designed the Mills Tower building, Fireman's Fund Insurance building, the University of California Hospital, and the Del Monte Hotel, now a U. S. Navy postgraduate school.

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BUILDERS BOARD URGES SPEED-UP IN APPRAISALS

Home building industry leaders at their annual Fall Conference in New York on October 8-14, urged the immediate hiring of additional Government housing personnel to help clear up the existing backlog of applications from home buyers throughout the nation who are seeking GI or FHA insured mortgage loans.

The builders, representing a Director's meeting and northeastern housing conference of the National Association of Home Builders, warned fast action is needed to break a log-jam in the Government Housing Agencies which is preventing many thousands of families from obtaining homes.

They pointed out that nationally the Veterans Administration is falling behind at the rate of 800 units a day in the handling of requests for GI home appraisals. Conditions in the Federal Housing Administration are even worse in some parts of the country. A major reason for the jam of applications is the increased opportunity provided in the new National Housing Act for 1954 for families to obtain new or existing homes on liberal financing terms.

Albert M. Cole, Administrator of the Housing and Home Financing Agency, announced subsequently that clearance had been received for the hiring of about 300 additional FHA employees.

VERMONT MARBLE ENTERTAINS

By special invitation of H. C. Fawsett, Pacific Coast Manager of Vermont Marble Company, members of the San Francisco Architectural Club visited the company's manufacturing plant and new office building at 6000 Third Street, San Francisco. There was a large turnout, including Northern California Chapter architects. Keen interest was shown in the operation of this fast growing plant, especially by the younger members of the profession, who seemed greatly impressed with the modern methods used in processing and finishing marble and granite veneer. One machine of each type was kept in continuous operation.

From the plant the visitors were shown about the company's new office building which was described and illustrated in Architect and Engineer in a recent issue.

ARCHITECTS NAMED ON AID

William Woolett, A.I.A., Los Angeles and Rita Miller, executive secretary of the Southern California Chapter A.I.A. were named to head the A.I.A. membership committee for AID for Construction Building Trades Week. Appointment was made by Ulysses F. Rible, A.I.A., president Southern California Chapter. Objective of the program is to enroll AID members among all sections of Southern California's construction industry.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

DESIGN FOR MODERN MERCHANDISING. By Editors of Architectural Record. F. W. Dodge Corpn, 119 W. 40th St., New York 18. Price $8.95.

Caught in an ever rising spiral of high rent, high taxes, and high labor and material costs, today's merchant is faced with serious problems when he decides to expand or physically change his establishment.

This book gives many of the answers relating to design of displays for various types of merchandise; floor area to be "open" for "comfortable shopping"; and graphically shows by actual photographs, drawings and designs the delicate relationship between good design and good business.

Anyone about to undertake new construction or renovation or expansion of a merchandising building will find this book valuable reading and full of useful ideas.

COMPARATIVE BRIDGE DESIGNS. By Prof. James G. Clark, University of Illinois. James F. Lincoln Arc Welding Foundation, Cleveland 17, Ohio. Price $2.00.

Presents designs by leading bridge designers in the United States to illustrate how significant savings in material and money can be achieved through the use of welded design.

Designs are welded designs of comparable riveted bridges, either existing or proposed. Major types of bridges in varying lengths are studied: continuous girder bridges, with and without floor beams; prestressed girder bridges; simple beam spans; simple trusses; continuous trusses; and arches. Major design elements from a number of bridges of each type are described. Original drawings by the designers are reproduced, along with designers' discussion and description.

THE WORLD'S GREAT BRIDGES. By H. Shirley Smith. Harper & Brothers. Price $3.50.

This book, incorporating a survey of the greatest bridges of the world, is the work of a leading British bridge builder in which he tells the story of man's achievements in this field from the great days of the Romans, Persians and Chinese, through the Renaissance era, right up to the birth of the modern masonry bridge and the gigantic suspension bridge. "The World's Great Bridges" recalls the dangers and difficulties encountered in overcoming natural obstacles: the mysterious "caisson disease" which attacked the first men to work in compressed-air chambers below water level; the story of the St. Louis bridge, when the last tube in the first arch proved to be ⅜ inch too long for the gap; and the Tacoma Narrows bridge, designed to withstand a gale of 120 m.p.h., but which collapsed after four months under a 40-mile wind. Many magnificent photographs and numerous line drawings.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

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Sound control products. Illustrated design data reference catalog (A.I.A. File No. 39-B) containing full data on every product in company's extensive line of sound control products; "Fiberglas Sound Control Products" describes acoustical line; organized to provide architects, engineers, builders and installers quick and complete data reference: installations, standard sizes, relative cost, noise reduction, fire resistance, and light reflection qualities. Copy of booklet available, write DEPT-A&E, Owens-Corning Fiberglas Corp., Toledo 1, Ohio.

Vermiculite plastering and plastic. Standard specifications for Vermiculite Plastering and for Vermiculite Acoustical Plastic are contained in a revised pamphlet (A.I.A. FILE No. 21-A-5,

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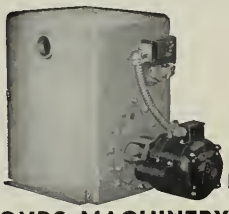

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CATALOGUES — Available

and A.I.A. File No. 39-B) recently published: revisions bring specifications in line with latest requirements of the ASA Specifications for Gypsum Plastering; covers General provisions, Vermiculite, Base coat Proportions and Setting Time, Studless Solid Partitions, Plaster on Monolithic Concrete and Vermiculite Finish Coat, Mixing, and Metal Lath Ceilings; plus suggestions for best plastering results. Copy available by writing DEPT-A&E, Vermiculite Institute, 208 So. La Salle St., Chicago 4, Ill.

Panel baseboard radiators. New booklet on baseboard panel radiation; exclusive design, construction detail, high per lineal foot E.D.R. heat output; for commercial and residential installation, hot water or steam; used in schools, churches, hospitals, offices, hotels, homes, factories, and on ships; installed 3 to 4 inches above floor; illustrations show typical installations, ratings, roughing-in-dimensions, design and construction features, tapping arrangement, piping connection for straight runs plus inside and outside corners, assembly and mounting instructions. Write DEPT-A&E, Shaw-Perkins Manufacturing Co., 201 E. Carson St., Pittsburgh 19, Pa.

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Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	2.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White . . . . 1 to 100 sacks, $3.50 sack warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk $12.05
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each	---	.62

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	3¼x2¼	½x2	¾x2	⅝x2
	$	$	$	$
Clear Otd., White	425	405		
Clear Otd., Red		405	380	
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390 00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
⅛ in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
⅛ in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
⅛ in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
⅛ in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee
With Thermostat Control,

20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides. ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (8asis 7¾ lbs. per gal.)		Wholesale Raw	Wholesale Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply. ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per ton $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10
1 ton to 5 tons, deduct 25c.	

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
OILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
San Francisco 10: 470 Alabama St., UN 3-1666
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

MEDICAL BLDG., Inglewood, Los Angeles county. Prairie Medical Office Bldg. Co., Inglewood, owner. 1 and part 2-story medical building, masonry construction; slab and asphalt tile floors, acoustical work, air conditioning, electrical, sheet metal, and cabinet work. ARCHITECT: Williams, Williams & Williams, Palm Springs. GENERAL CONTRACTOR: Ted F. Merrill, Inglewood.

NEW HIGH SCHOOL, Carmichael District, Sacramento county, San Juan Union High School District, Fair Oaks, owner. First-Unit, 18,000 sq. ft. of floor area; frame and stucco construction, some structural steel, some reinforced concrete tilt-up; 10-classrooms, offices, 2-home making rooms, locker rooms, toilet rooms—$226,792. ARCHITECT: Chas. F. Dean, Sacramento. GENERAL CONTRACTOR: Campbell Const. Co., Sacramento.

CRASH & FIRE STATION, Castle Air Force Base, Merced county. U. S. Corps of Engineers, San Francisco, owner. 1-story, reinforced concrete and concrete block, wood frame roof on steel beams, utilities, paving road — $157,784. GENERAL CONTRACTOR: Stolte Inc. Oakland.

MANUFACTURING BUILDING, Burbank, Los Angeles county. Big Boy Mfg. Co., Burbank, owner. Diagonal wood sheathing, concrete slab, composition roofing, wood trusses, steel sash, skylights, sliding doors, loading dock, toilet facilities —$30,000. STRUCTURAL ENGINEER: Frederick J. Alexander and Victor Meyer, associate, North Hollywood.

SUNDAY SCHOOL & SOCIAL HALL, Palo Alto, Santa Clara county. 1st Presbyterian Church, Palo Alto, owner. Frame and stucco — $226,900. ARCHITECT: Leslie I. Nichols, Palo Alto. GENERAL CONTRACTOR: Morris Daley, Burlingame.

ELEMENTARY SCHOOL, Alameda, Alameda county. Alameda Unified School District, Alameda, owner. New 1- and 2-story reinforced concrete frame and stucco construction; 13-classrooms, 2 kindergartens, toilet rooms—$504,350. ARCHITECT: Kent & Hass, San Francisco. GENERAL CONTRACTOR: Pacific Coast Builders, San Francisco.

CHURCH, Loma Linda, San Bernardino county. Loma Linda Seventh-Day Adven-

tists, Loma Linda, owner. Reinforced concrete building seating 2000; 6 classrooms baptistry with dressing rooms, tape recording room, acoustical treatment of all auditorium space, choir loft seating 80, two mothers rooms, indirect lighting, youth chapel seating 250, and announcer-type paging service—$685,000. ARCHITECT: Earl Heitschmidt, Los Angeles. GENERAL CONTRACTOR: L. C. Havstad & E. R. Jensen, Los Angeles.

OFFICE BLDG. ADD'N, Visalia, Tulare county. Southern California Gas Co., Los Angeles, owner. Reinforced concrete slab floor, steel girders, wood roof, acoustical ceilings, plaster, composition roofing, asphalt tile floors, plate glass sliding doors, movable partitions, electrical work—$219,408. ARCHITECT: Parkinson, Powelson, Briney, Bernard & Woodford, Los Angeles. GENERAL CONTRACTOR: L. M. Hansen & Son, Fresno.

GOLF CLUB HOUSE, San Jose, Santa Clara county. Almaden Development Co., San Jose, owner. 1-story frame construction, adobe exterior, steel sash, plate glass, shake roof, colored concrete, asphalt and plastic tile floors, 7,000 sq. ft. floor space —$91,835. ARCHITECT: Gross & Marburg, San Jose. GENERAL CONTRACTOR: E. A. Hathaway, San Jose.

CAFETORIUM, Kettlemen City, Kings county. Reef-Sunset Elementary School District, Avenal, owner. Frame and stucco building —$97,970. ARCHITECT: Coates & Metz, Fresno. GENERAL CONTRACTOR Ochs Const. Co., Fresno.

CHURCH, Walnut Creek, Contra Costa county. Valley Baptist Church, Walnut Creek, owner. Frame and stucco construction—$56,993. ARCHITECT: Alfred W.

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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ARCHITECTURAL SLIDING STEEL SASH, One lot only — new, half price. 13 units, assorted sizes, 353 square feet total. 3 at 7 ft. x 5 ft.; 4 at 7 ft. x 4½ ft.; 1 at 6 ft. x 4½ ft.; 2 at 6 ft. x 4 ft.; 1 at 7 ft. x 3½ ft.; 1 at 4½ ft. x 3 ft.; 1 at 3 ft. x 3 ft. Phone DElaware 3-7378, San Francisco.

COLLECTIONS—Thoroughly experienced in all phases of the collection business; your interests protected at all times; bonded agents everywhere; no collection no charge; California Material Dealers Service Co., 925 Hearst Bldg., San Francisco. Ernest T. Langley, Manager.

ARCHITECT-DESIGNER, registered Midwest, NCARB qualifications, searching for possible permanent association. Sixteen years versatile responsible experience: industrial, institutional, commercial, residential with nationally prominent concerns. Finest training, clever renderer, flexible detailer. Can lead men, handle clients. Will travel for interviews. BOX 528, ARCHITECT & ENGINEER, INC., 68 Post St., San Francisco, Calif.

SAND BLASTING EQUIPMENT and sand: Painters scaffolding, compressors rented, etc. Call JACK SMITH for prices. Smith Industrial Supply Co., 395 Irwin St., San Francisco. Phone UNderhill 1-2861.

HOME BUYERS—Now building moderate priced homes in Sacramento and Marysville area; we are in a position to serve your needs. "Better Built Homes" by Ronne, Ronne & Ronne, Builders, 201 Calvado, North Sacramento.

Designing a new room. Here is a wonderful point of departure.

THE FAMOUS FABLE MURALS by the Carmel artist Jo Mora are for sale. Charming, interesting, different! A delightful series of well dressed animals engaged in the multiple activities of people and looking very much like them. 7 full color oil panels in first rate condition: 4 48" by 142"; 1 48" by 105"; 1 36" by 94"; 1 58" by 120". Inquire: J. B. Quigley, Drake Wiltshire Hotel, San Francisco.

POSITION AVAILABLE: Civil Engineer, Structural Engineering Branch, for Architectural and Engineering Office with at least three years experience designing to Code requirements. Write 9025 Santa Monica Blvd., Beverly Hills, Calif.

PLEASANT ARCHITECT, completely experienced, young, desires responsible position with firm leading to purchase of interest. Box 529, ARCHITECT & ENGINEER, 68 Post Street, San Francisco, California.

EXPERIENCED aggressive young architect wanted by major manufacturer of multiple story building material to handle sales contacts. Opportunity commensurate with ability. Write Box No. 527, Architect and Engineer, 68 Post St., San Francisco 4, Calif.

YOUNG ARCHITECT seeks permanent association in Bay Area. A.I.A., N.C.A.R.B., M. Arch. M.I.T., B.S. Univ. of Illinois, Designer with engineering background, winner in national competition, 12 years varied experience and private practice. Reply, Box 526, Architect & Engineer, Inc., 68 Post St., San Francisco 3, California.

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POSITION AVAILABLE—California Architect to head section with an established Southern California Architectural and Engineering firm. Good salary plus profit sharing; medical plan and paid vacations. WRITE fully to firm direct. P. O. Box "N", Rosemead, Calif.

RENTAL—$175.00 Mo. 400 sq. ft. office space, 300 sq. ft. warehouse space, parking area. Suitable for factory distributor. Write or phone Mr. Dillon, 252-12th St., San Francisco, HEmlock 1-3943.

Johnson, San Francisco. GENERAL CONTRACTOR: James H. Sumpter, Concord.

OFFICE BLDG. REMDL., San Francisco. San Francisco Federal Savings & Loan Association, San Francisco, owner. Remodel interior and exterior of 3-story building on corner of Post and Kearney streets in San Francisco — $110,000. ARCHITECT: Reimers & Overmire, San Francisco. GENERAL CONTRACTOR: W. C. Tait Co., San Francisco.

OFFICE AND WAREHOUSE, Long Beach, Los Angeles county. Drown News Agency, Long Beach, owner. Composition roofing, concrete and asphalt tile floors, forced air heating, aluminum louver and steel projecting sash, acoustical tile ceilings, toilet rooms, ceramic tile work, asphalt parking areas; 23,300 sq. ft. in area —$75,000. ARCHITECT: Roy Donley, Los Angeles. GENERAL CONTRACTOR: Millie & Severson, Long Beach.

ELEMENTARY SCHOOL ADD'N, Rio Linda, Sacramento county, Rio Linda Union Elementary School District, Rio Linda, owner. Frame and stucco; 5-classrooms, kindergarten, 3-special rooms, toilet rooms —$154,282. ARCHITECT: Sellon & Cox, Sacramento. GENERAL CONTRACTOR: Edwin J. Mackay, Sacramento.

FIRST AID STATION, San Jose, Santa Clara county. City of San Jose, owner. 1-story concrete block and steel frame, steel sash, concrete and asphalt tile floors— $52,292. ARCHITECT: Evans & Lincoln, San Jose. GENERAL CONTRACTOR: Hughes Const. Co., San Jose.

OFFICE & WAREHOUSE, San Francisco. Reynolds Metal Corp., San Francisco, owner. 3-story office building and 1-story warehouse; steel and frame construction, aluminum facing. ARCHITECT:: Loubet & Glynn, San Francisco. GENERAL CONTRACTOR: Haas & Haynie, San Francisco.

MEN'S DORMITORIES, Nevada Proving Grounds, Nye county, Nevada. Atomic Energy Commission, Las Vegas, Nevada, owner. Construction of 4 men's dormitories, water distribution, sewers, air conditioning, asphalt paving — $157,737. ARCHITECT: Silas Mason & Co., Las Vegas. GENERAL CONTRACTOR: Shelton Mill & Constn. Co., Las Vegas, Nevada.

SAFEWAY STORE, San Bernardino. Safeways Stores, Inc., San Bernardino, owner. Reinforced concrete, structural steel brick masonry walls, composition roofing, slab floor, terrazzo and asphalt tile work, acoustical, plastering, electrical, insulation, air conditioning, toilets, glass doors, paving: 170x120 ft. ENGINEER: J. P. Kinnikin, San Bernardino — MECHANICAL ENGINEER: R. L. Thompson, Long Beach—ELECTRICAL ENGINEER: Henry Simmons, Long Beach. GENERAL CONTRACTOR: Robinson & Wilson, San Bernardino from Bramwell Constr. Co., Los Angeles.

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ARCHITECT and ENGINEER

68 Post St. San Francisco

ST. VINCENT HIGH SCHOOL, Vallejo, Solano county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. 1-story, basement, mezzanine, type-3 reinforced concrete tilt-up construction; structural steel, maple floor in gymnasium, 77x136 feet in area; conference room, cafeteria, gymnasium, shower room—$265,200. ARCHITECT: Buchter & Lillis, San Francisco. GENERAL CONTRACTOR: Barrett Const., San Francisco.

MEDICAL BLDG. ADD'N, Oakland, Alameda county. Owner c/o Architect. 1-story concrete block and frame construction—$32,450. ARCHITECT: Harry A. Bruno and Robert Bettencourt, Oakland. GENERAL CONTRACTOR: Harry K. Jensen, Oakland.

AIRCRAFT PARTS PLANT, Phoenix, Arizona. Babb Co., Inc., Phoenix, owner. Office and shop building 300x158 feet, warehouses 200x300 feet: masonry walls, built-up roofing, concrete and asphalt tile floors, refrigerated air conditioning, evaporative coolers, insulation, metal lath and plaster, sprinkler system, steel sash, steel roof trusses, vault doors, acoustic tile, sheet metal, electrical plumbing — $500,000. ARCHITECT: Edward A. L. Cox, Phoenix. GENERAL CONTRACTOR: Homes & Son, Phoenix, Arizona.

CHURCH, Burlingame, San Mateo county. First Presbyterian Church of Burlingame, owner. Frame and stucco addition and remodel to present facilities, some stone veneer—$246,970. ARCHITECT: A. W. Johnson, San Francisco. GENERAL CONTRACTOR: Arthur Bros., San Mateo.

AIRPLANE HANGAR, Municipal Airport, San Diego. City of San Diego, owner. Prefabricated steel, 10-unit T-type airplane hangar at Montgomery Municipal Airport, San Diego; corrugated sheet metal partitions — $21,319. GENERAL CONTRACTOR: Pascoe Steel Corpn., Pomona.

GYMNASIUM BLDG., Taft, Kern county, Taft Elementary School District, Taft, owner. Frame and stucco, laminated roof trusses, folding bleachers, 15,270 sq. ft. floor space — $196,300. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: Willard K. Mitchell, Bakersfield.

CENTRAL GARAGE, SERVICE SHOPS, University of California, Yolo county. University of California, Davis owner. 1-story structural steel frame, aluminum exterior, garage building including service shops and storehouse — $578,871. ARCHITECT: Franceschi & Mullen, Sacramento. GENERAL CONTRACTOR: Stolte, Inc., Oakland.

ELEMENTARY SCHOOL, Barstow, San Bernardino county. East Barstow School, owner. East Barstow Cameron School, frame and stucco construction, 40,000 sq. ft. floor space; composition roofing, concrete floor, radiant heating, steel sash, acoustical work, ceramic tile, painting, plastering, plumbing, electrical work, structural and miscellaneous metal, sheet metal, chalkboard, ventilating—$619,000. ARCHITECT: Kistner, Wright & Wright, Los Angeles. GENERAL CONTRACTOR: C. E. DeWitt, San Fernando.

SOUTHERN COUNTIES GAS, Pomona, Los Angeles county. Southern Counties Gas Company, Los Angeles, owner. Group of steel buildings to be known as Eastern Division Operating base; office building, warehouse of 11,900 sq. ft., garage of 2800 sq. ft., locker room and toilet building 1040 sq. ft., utility building of 685 sq. ft.; site work, metal decking, slab floors, steel sash, acoustical work, electrical, paving, fencing, lawn sprinklers, yard lighting—$533,000. ARCHITECT: B. H. Anderson, Pomona. GENERAL CONTRACTOR: Claremont Constr. Co., Claremont.

CONVERSION POLICE STABLES. San Francisco, City and County of San Francisco, owner. Conversion of Ingleside police stables into athletic facilities and a clubhouse—$116,251. GENERAL CONTRACTOR: Oscar Presco & Son, San Francisco.

CITY HALL REPAIRS, Tucson, Arizona. City of Tucson, owner. Completion of structural reinforcing and repairs to the City Hall—$44,917. ARCHITECT:Anne Rysdale, Tucson. GENERAL CONTRACTOR: J. J. Craviolini, Tucson.

BANK BLDG., Hanford, Kings county. Anglo California National Bank, San Francisco, owner. Temporary remodel, pending adoption of permanent plans, interior and exterior of building—$30,870. ARCHITECT: William Hastrup, Fresno. GENERAL CONTRACTOR: R. H. Hougham, Hanford.

DOCTORS OFFICE, Reno, Nevada. Owner c/o Architect. 2-story brick and frame construction: 2 office suites and 2 apartments — $67,444. ARCHITECT: Russell Mills, Reno. GENERAL CONTRACTOR: J. C. Dillard, Reno, Nevada.

TOLL COLLECTION EQUIPMENT, San Rafael-Pt. Richmond Bridge, Contra Costa county. State of California, Division of Toll Bridge Crossings, Berkeley, owner. Contract for toll collection equipment—$275,541. GENERAL CONTRACTOR: Scott-Butner Elect. Co., Oakland.

INDUSTRIAL ARTS BLDG., Kentfield, Marin county. College of Marin, Kentfield, owner. 1-story, reinforced concrete construction — $415,196. ARCHITECT: Wm. Corlett, San Francisco. GENERAL CONTRACTOR: Fairchild Constr. Co., Fairfax.

OFFICE BLDG., Phoenix, Arizona. Ouebedoux Development Co., Phoenix, owner. 1-story, basement and mezzanine, 10 rooms, 76x93 ft., masonry construction; asphalt tile floor, air conditioning, metal canopy, steel roof trusses, plaster, plate glass, steel sash, vault, auto show room—$78,000. ARCHITECT: Victor Gruen, Los Angeles. GENERAL CONTRACTOR: Mardian Constr. Co., Phoenix.

SHRINE HOSPITAL ADDN., San Francisco, owner. New 2-story wing and addition of 1-story to existing 2-story

wing; reinforced concrete and structural steel, brick veneer exterior; new surgery, classrooms, clinic facilities — $400,000. ARCHITECT: Stone, Mulloy & Marraccini, San Francisco. GENERAL CONTRACTOR: Wagner & Martinez, San Francisco.

SCHOOL CAFETERIA, Taft, Kern county. Taft City School District, Taft, owner. Construction of a cafeteria building, cafeteria equipment, and changes to boiler plant and facilities, $154,940. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: David M. Biggar, Bakersfield.

BRANCH BANK, Fruitridge, Sacramento county. Anglo-California National Bank, San Francisco, owner. 1-story and mezzanine addition to the Fruitridge Branch Bank on Stockton Blvd.; concrete block and frame construction, concrete vaults, $132,000. GENERAL CONTRACTOR: Stolte, Inc., San Leandro.

IN THE NEWS

SUGAR BUILDING

Architect Clarence W. W. Mayhew of San Francisco, has completed plans for construction of a 1-story frame and stucco office building to be built in San Mateo for the Holly Sugar Corp., of San Francisco.

The new building will contain 12,000 sq. ft. of floor space and will cost an estimated $172,500.

SCHOOL LIBRARY

Architect Charles F. Dean of Sacramento, is completing plans for construction of a new library building for the Shasta Union High School District, Redding.

The building will be of frame and stucco construction.

BUILDERS EXCHANGE

Architect Whitney Biggar of Bakersfield, is completing drawings for construction of a new office building in Bakersfield for the Bakersfield Builders' Exchange.

Construction will be frame, stucco and concrete block with an area of 2000 sq. ft.

SHOPPING CENTER

Associate architects Robert Kleigman and Matthew R. Leizer of Los Angeles, have completed drawings for the construction of a new shopping center to be built on a 30-acre site in Riverside, California, for H. M. Lerner.

The project will include a 30,000 sq. ft. market; a community building 50 x 100 feet; bowling alley, department store, two variety stores, restaurant, drug store, several stores and shops and will provide parking for 3000 automobiles.

Estimated cost of the project is $5,000,000.

CHURCH CLASSROOMS

Engineer Pat Fretto, and Bennet & Hoxie, of Van Nuys, have completed plans for construction of a 5-classroom, frame and stucco classroom building in North Hollywood for the Emanual Lutheran Church.

Construction will include composition roofing, concrete slab, asphalt tile, metal sash, wall heaters, and electrical work.

RESIDENCE HALL FOR WOMEN

Architects W. C. Hayes and Herbert E. Goodpastor of Sacramento, have completed drawings for construction of a new Residence Hall for Women to be built on the University of California campus at Davis.

The new building will provide accommodations for 200 women students and will be of 3-story reinforced concrete, lift-slab and concrete block construction; freight elevator, administration rooms, recreation and dining building which will be 1 and 2-story.

Estimated cost of the work is $700,000.

CORRUGATED BOX PLANT

The American Forest Products Corp. of Newark, Alameda county, is completing plans in their engineering department for construction of a new $2,500,000 corrugated box manufacturing plant to be built on Roberts Avenue and Cedar road.

The plant will contain 125,000 sq. ft. of floor area; reinforced concrete and steel construction, steel sash.

CEREBRAL PALSY CENTER PLANNED

The Cerebral Palsy Association of Oakland has commissioned the architectural firm of Warnecke & Warnecke, Oakland, to draw plans and prepare specifications for construction of a Cerebral Palsy Center building to be built on Lincoln Avenue in Oakland.

Plans call for a 1-story masonry and frame constructed building.

WAREHOUSE AND OFFICE

Engineer George Novikoff, Los Angeles, has completed working drawings for the construction of a tilt-up and flagstone veneer warehouse and office building for the Alpha Beta Food Market, Inc., in La Habra.

The building contains 66,000 sq. ft. of floor area, wood bow-string trusses, composition roofing, concrete slab, asphalt tile and ceramic tile floors, drywall end acoustic tile, metal and wood louvered doors, steel roll-up doors, electrical work, toilets with metal partitions, thermal insulation, skylights, plate glass, air con-

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FEDERAL FUNDS FOR SCHOOL

The Alameda Unified School District, Alameda, has been allocated $1,749,363 in school funds to be used in the construction of a new Washington Elementary School and for additions to the Otis Elementary School.

ARCHITECT SELECTED

The architectural firm of Ambrose & Spencer of San Francisco, has been commissioned by the Board of Trustee of Stanford University, Palo Alto, to design an addition to Lucia Stern Hall on the Stanford University Campus.

The addition will comprise two new wings and a dining hall to accommodate 200 men; reinforced concrete construction, the building will be three stories in height and will cost an estimated $930,000 to build.

AUTO SALES AND SERVICE

Stiles Clements, associated architects and engineers, Los Angeles, are preparing plans for construction of a sales and service building on Wilshire Boulevard for the George W. Carter Company, to lease to the Cadillac Motor Car Division of General Motors Corpn.

OAKDALE SCHOOL

The architectural firm of Sellon & Cox, Sacramento, are completing plans for construction of a frame and stucco Elementary School addition comprising 6-classrooms and kindergarten facilities, for the Oakdale Elementary School in Oakdale.

GLENN A. BUSTRUM JOINS JUNIOR STEEL

Glenn A. Bustrum, engineer, has joined the staff of the Junior Steel Company, Los Angeles.

He was formerly with Donald F. Shugart, Structural Engineer, Los Angeles.

ARCHITECT GIVES FAR EAST REPORT

Jack C. Lipman, with the architectural-engineering firm of Daniel, Mann, Johnson & Mendenhall, Los Angeles, was the principal speaker at the Producers Council meeting in the Los Angeles Athletic Club, recently.

As the Far East representative of his firm for the past two years, and but recently returned to this country, the speaker gave first hand information on engineering projects in the Pacific area, particularly Okinawa, Japan and Thailand.

Lipman has been elected into membership in the Far East Society of Architects with headquarters in Tokyo, and also holds an honorary membership in the Association of Siamese Architects in Bangkok.

SCHOOL BONDS APPROVED

Voters of the Visalia Elementary School District, Visalia, recently approved a proposal to issue and sell bonds in the sum of $980,000 to finance the construction of a number of new school facilities in the city.

NEW MASONRY FLOOR FINISH

A new masonry floor finish that is also usable on metal surfaces such as industrial machinery has just been announced.

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ARCHITECT SELECTED

The architectural firm of Horn and Mortland of Fresno has been commissioned by the Fresno Unified School District to draft plans and prepare speci-

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fications for the construction of the W. B. Holland Elementary School.

Construction will comprise 6-classrooms, administration room, 2-kindergartens, kitchen, multi-purpose room, toilet rooms and a covered passage way between buildings. Buildings will be of frame and stucco.

APPOINTED SALES MANAGER

Elmo G. Guiles has been appointed vice-president and manager of sales of the Toland-McKune Company, with general offices in San Francisco. The firm represents a number of products in the construction materials field.

Guiles was formerly associated with Soule Steel Company.

RESIDENTIAL DEVELOPMENT

The Curtis Homes of San Lorenzo has acquired a site near the Castlewood Country Club, Pleasanton, and will start immediate construction of a group of 98 residences.

The new homes will be of frame and stucco construction and will sell in the price bracket of $15,000 to $30,000 each.

APPOINTED GE PLANT MANAGER

Harold C. Jenseth has been appointed plant manager of the San Francisco plant of General Electric's Distribution Assemblies Department, according to C. K. Skinner, manager of manufacturing.

Jenseth has been serving as Service Engineer of the firm's Electric Service shop in Seattle, Washington, and more recently held the position of Supervisor of Engineering in the Seattle plant.

COMMUNITY HOSPITAL

Architects Stone, Mulloy & S. P. Marraccini of San Francisco, are working on drawings for the construction of a 50-bed Community Hospital Building to be built

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

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L. B. Penhorwood, Business Mgr.

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SCHOOL BONDS APPROVED

Voters of the Redwood City Elementary School District, Redwood City, approved the issuance and sale of $1,500,000 in bonds with funds to be used for the construction of a new elementary school building in Redwood City.

CLASSROOM GYMNASIUM

Architect Kemper Goodwin of Tempe, Arizona, is completing plans for construction of a classroom building, shop building, and gymnasium at Tempe Union High School, for the Tempe Union High School district.

Construction will be masonry and steel frame.

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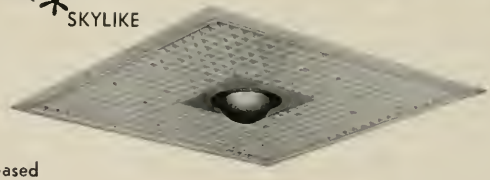

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COVER PICTURE

ST. PAUL'S
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James L. Payne, Architect

In keeping with the spirit of the Holiday Season, the "Church" theme is given emphasis on this month's cover of Architect & Engineer.

Additional pictures of the St. Paul's Episcopal Church, together with a number of photographs and descriptive story on modern western church architecture will be found on page 8.

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Season's Greetings

On this, the eve of our fiftieth anniversary
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It is with real pleasure
that we take this opportunity
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BIGGEST BUILDING BOOM PREDICTED FOR FUTURE

By R. G. HUGHES

President, National Association of Home Builders

The home building industry is rounding out the second biggest year in its history and is getting set to mark up some new production records in 1955.

Present estimates indicate that the industry will provide new housing for about 1,200,000 families of all income brackets during 1954 and the outlook is for construction of perhaps as many as 1,400,000 housing units in 1955, barring a major reversal of today's economic conditions. Such a construction pace would add some $14 billion to the real wealth of the nation and would make 1955 the biggest home building year on record.

Any forecast of home building activity, of course, depends to a great extent on the policies of the Federal Government. But it is no secret that the Government's present plans call for continuation of the same fiscal and credit policies that are now in effect, subject to such modifications as may become necessary in the months ahead. Those plans also envisage the full use of all the liberal provisions of the National Housing Act of 1954, to assure the country a continued high rate of home building.

The 1954 act contains many bold trail-blazing provisions. It should enable government and industry to combine their efforts and to create completely new concepts in housing—to open up vast new housing markets that will give every American family the opportunity to live in a good, solid, livable and satisfactory home in a decent environment.

The low down payments and long-term mortgages permitted under FHA sections of the act can make good housing available to a great many families never before reached by the home building industry. Hundreds of thousands of non-veterans will be able to buy new homes on terms they can afford. Prior to enactment of this legislation, their required down payment would buy only half the house they needed and wanted and are now in a position to buy.

Servicemen on active duty make up another market that has been expanded by the new housing law. Service families may now obtain long-term FHA-insured mortgages on terms comparable to those available for veterans—only 5 per cent down with a maximum mortgage insurance of $17,100.

In addition to the new housing market, there is a great and largely untapped demand for rehabilitation and maintenance of our existing housing inventory, which could run anywhere from $6 billion annually on a conservative estimate. For the first time in history, FHA insurance is now available for mortgages on dwellings that in the past have been treated as uninsurable slums or blighted parts of the community. Financing aids for such mortgages hereafter will be available through special assistance functions of the Federal National Mortgage Association. There are obstacles that must be overcome, but these programs promise bright future for the renewal and rehabilitation of dying areas of our cities.

There are tools in the new housing law, too, that will enable the home building industry to do a real job in modernizing and bringing back into new condition the vast number of existing homes which, while not slums, are in need of major overhauling. For example, both the FHA and VA are now able to put into effect open-end mortgages under which home owners as well as new home buyers may obtain long-term financing for the improvements, modernization or repairs needed to maintain their homes in the best possible condition.

One of the major problems (and opportunities) facing the home building industry in 1955 is the provision of good housing for minorities. Naturally, this problem is more acute in some areas than in others. But it is generally a fact throughout the country that builders long have been ready to build the new housing needed by minorities. They have been unable, however, to obtain the financing needed to accomplish this objective.

We now have two major Federal aids which I believe can help solve this problem. In the first place, the voluntary credit committee created by the new law can channel private funds into areas for minority housing. In the second place, the special assistance functions of FNMA can be used to buy mortgages on minority housing. Once this financing roadblock is surmounted, the big remaining problem will be the acquisition of building sites. This problem can and will be solved. And its solution will open up a vast untapped market for new homes—a market which has been too long neglected and for which all of private industry has a social responsibility.

Another serious problem confronting the housing industry is that of obtaining adequate community facilities. If we are to provide the huge number of homes that will be needed in the next 10 to 20 years,

(See Page 30)

NEWS and COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., announces a holiday schedule of exhibitions and events which will include the following:

EXHIBITIONS—Stitches and Time, an exhibition of 500 years of European, Near Eastern and American textiles; 18th and 19th Century Porcelains, from the Spreckels Collection, including a number of recent acquisitions; Animal Sculpture, from the Museum's collections; Watercolors, by Ernst Huber; Paintings, by Serge Ivanoff, and Paintings, by Joseph C. Bradley.

The Achenbach Foundation for Graphic Arts is featuring, at the Museum, a collection of Contemporary Religious Prints from the Ross W. Sloniker collection and a special exhibition of recent acquisitions. The Loan Exhibit at the San Francisco Public Library will feature The Animal World in Prints, and From Durer to Dali, representing five centuries of religious prints.

SPECIAL EVENTS—Organ program each Saturday and Sunday at 3 o'clock; Motion Picture Series

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park, San Francisco

Detail from

"The Drama of the Resurrection"

Christ surrounded by the virtues appears to His Mother.

offering a group of films on stories of the sea; and educational activities, including painting classes for children each Saturday morning.

Museum is open daily 10 a.m. to 5 p.m. and on holidays 1 p.m. to 5 p.m. Admission is free.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is offering a special Christmas Exhibition including "The Big Top"—a Circus Carnival with oils, watercolors, drawings, prints and sculpture by fifty artists of the Rotunda Circle.

Numerous prize awards will be made by a Jury of John Gutmann, San Francisco State College; John Humphreys, San Francisco Museum of Art; Elizabeth Polley, Vallejo Times-Herald staff; Robert Sterling, Palace of the Legion of Honor, and Ninfa Valvo of the deYoung Memorial Museum.

M. H. DeYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, has arranged a special holiday program of exhibitions and special events.

EXHIBITIONS—Mosaic Altarpiece (Triptych) by Louise Jenkins, Mt. La Salle, Novitiate Chapel, Christian Brothers, Napa, California; Jewelry and Metalwork, by Victor Ries, and Wood Sculpture, by Ding; Prints by Elizabeth Ginno and Agusta Rathbone; Charles Sheeler Restrospective Exhibition of Paintings, Drawings and Photographs; and Contemporary American Indian Paintings, an exhibition sponsored by the Department of the Interior and the Indian Defense Association of Northern California.

SPECIAL EVENTS—Classes in art enjoyment for adults; Painting for pleasure, Execises in perception; Seminars in the history of art, and classes for children in Picture Making, Art and Nature and the Art Club are regularly scheduled for weekdays and Saturday morning.

Museum is open daily 10 a.m. to 5 p.m. No admission charge.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, which is under the direction of Dr. Grace L. McCann Morley, is offering a special holiday schedule of exhibitions and events for December.

EXHIBITS: A collection of work of younger European painters; the annual special Christmas exhibition which offers a wide variety of Christmas gift selections and the showing of Art for Christmas Giving; another special exhibition is entitled Christmas Trees and Ornaments; selections from the Albert M. Bender Memorial; photographs by William Garnett, Dick McGraw, and John Nesom; 29th annual exhibition of the San Francisco Women Artists; and paintings by Per Krohg, a retrospective loan exhibition under the patronage of the Embassy of Norway, Washington, D. C.

SPECIAL EVENTS: Concerts and programs, lecture tours, adventures in drawing and painting, art studio for the layman, and children's art classes are regularly scheduled.

The Museum is open Monday, 12 to 5, Tuesdays through Saturday, 12 noon to 10 p.m., and Sundays and Holidays, 1 p.m. to 5 p.m.

AMERICAN INDIAN PAINTINGS AWARDS ARE ANNOUNCED

Winners in the exhibition of contemporary American Indian Paintings, an unusual and interesting exhibition sponsored jointly by the U. S. Department of the Interior and the Indian Defense Association of Northern California, which is currently on exhibition in the M. H. deYoung Memorial Museum, San Francisco, include the following.

"The Hunt's On," a pencil and ink drawing by Richard David Takilnok, an Eskimo living in Mt. Edgecumbe, Alaska, was awarded first place; second place winner was Helen Boswell, a Cherokee Indian living in Birmingham, Alabama, who submitted an oil painting, "Summer."

Gilbert Atencio, a Tew Indian living in San Ildefonso, New Mexico, and Frank Paul Vigil, a Jicarilla Apache Indian of Jemez Pueblo, New Mexico, tied for third place. Atencio submitted a tempera "San Ildefonso Hunting Dance," and Vigil entered "Preparing For The Bear Dance," also a tempera.

Honorable mention was given Noah Deere, Brummett Echhawk, Otis Polelonema, and Pablita Velarde.

FRIENDLY STREET CHURCH OF GOD, Eugene, Oregon

A SEARCH FOR THEIR OWN FORM IN CHURCH ARCHITECTURE

By ARTHUR W. PRIAULX

Parabolic arch frames chancel in effective manner in this Eugene, Oregon, Church designed by Architect John E. Stafford.

There is no question but that western architects have in recent years given a new concept and stimulation to the design of religious buildings. Pomp and ponderous architecture have given way to powerfully effective simplicity, purity and vitality. Tradition still has its place, of course, and always will in the church structure, but blind tradition is no longer a blind obstruction to the creative imagination of the newer school of western designers.

It is probably too early to attempt to classify this forceful trend in western church design. However, these elements must be noted. Increasing use of native materials, especially wood in its new laminated form, and stone and glass in harmony. Emphasis on the functional and elimination of the complicated, superfluous and intricate non-functional aspects usually associated with older religious structures.

A notable advance in design has been made possible by the development of the large glu-laminated wooden arches to form roof and walls to fit the purpose of the building. This has cut costs appreciably by reducing volume and areas in the modern church and saves on heating and ventilating costs during years of use.

Certainly here in the west there is more than mere lip service being given to modern design in church structures. There is an encouraging willingness on the part of many architects to break with the past and strike out into more realistic byways. This could be interpreted, too, as a renewed expression of faith in our own times. Who is to say that this refreshing new church architecture is not one of the contributing factors to an astounding increase in church attendance.

The contemporary theme is as much at home in the tiny chapel, the country mission, the large city church or the cathedral. Interestingly enough, the very same new engineering materials, such as the laminated wood arches and beams, which have put new tools in the hands of the imaginative architect and which have opened up an entire new horizon in design possibilities are as adaptable for the tiny structure as for the very large church plant. Flexibility is the real keynote.

A feeling of the countryside has been achieved by Architect James L. Payne (see cover and page 9) in his effectively simple design of the St. Paul's Episcopal Church of Salem, Oregon. Parish members feel this church expresses more nearly their way of life. There is beauty here without ostentation. Use of native woods on the exterior walls ties in closely with the theme developed throughout the interior.

The long, tapering Tudor arches of laminated Douglas fir, and the purlins and exposed decking of the same material create the perfect picture of tranquillity and beauty. Here Architect Payne has used native materials with delicate understanding. This is a warm and friendly church in the nature of the people who worship here.

The countryway theme has been captured to a remarkable degree in another small cottage-type mission building designed by Architects Fox and Ballas of Missoula, for St. Mary's Church at Stevensville, Montana (see page 10). Here again the architects have capitalized on a sympathetic use of native stone and

St. Paul's Episcopal Church

That the countryside theme in religious building design is becoming increasingly popular is shown in this Salem, Oregon church by Architect James L. Payne.

Folksy quality of wood is developed without effort in the interior to conform to wood sided exterior.

St. Mary's Church
Stevensville,
Montana

Quiet, restful and simple, this interior reveals the character of the devout who worship here.

Architects Fox and Ballas have combined native stone and wood to create this mission church in the Montana hills.

wood to achieve a rapport with the surrounding countryside and the homes of that region. The original St. Mary mission church, made of hand-hewn logs was retired after 113 years of service and the parishioners have made the transition from old to new with no visible shock, for the new mission has been built of laminated fir arches and the larch paneled chancel has lost none of its original beauty and meaning.

An excellent example of contemporary design in the religious field and the flexibility of modern styling in meeting set problems is the Seventh Day Adventist church headquarters in Portland, Oregon (see page 11), created by Architects Williams and Martin.

An unusual saw-tooth wall, which in effect is a series of vertical clerestories, was used in an effort to get maximum natural light and yet reduce the harshness of the south and east light. The result is a nave and chancel with a serene blending of north light. Saw-tooth walls were built of Douglas fir decking to match the native materials used throughout the interior of this fine church structure. Another problem confronting the architects on this structure was to get

maximum usable floor area on the restricted site. To accomplish this the walls were conventional with the roof section made up of slightly tapered laminated beams set on a hardly noticeable angle to accommodate the flat roof drainage. The walls are forty feet high and the main roof section is sixty feet across. The saw-tooth design on the street side effectively breaks the monotony of a solid wall and gives a most interesting character to the structure.

Certainly one of the more unusual contemporary church structures in the northwest is the Friendly Street Church of God at Eugene, Oregon (see page 8), designed very creditably by Architect John E. Stafford. The exterior has been built in western red cedar to create a definite feeling of belonging to the surrounding residential area. Treatment of the spire in a near abstract form is most impressive. Architect Stafford has used native cedar and fir with intelligent balance throughout the entire interior of this handsome church home.

A sweeping parabolic arch frames the chancel and tones down any stiffness which the vertical walls of the nave might develop. Interesting carved wood panels in sculpture relief adorn the two facing walls of the chancel and lend enchantment and variety. Indirect natural light from the inset base of the spire almost eliminates the need for artificial light in the

chancel and choir loft excepting only on the darkest days. Stained clerestory windows on either side of the nave high up along the walls diffuse even late afternoon light with a marked intensity, which makes unnecessary additional lights. Main chancel roof is supported by modified laminated arches which carry an elaborate network of purlins and cross bracing. This church building has many distinguishing features, but the extensive use of native woods to create a charming,

Stone Tower Center
Seventh Day
Adventists

Portland, Oregon

Saw-tooth walls in this church by Architects Williams & Martin, serve dual function of utility and decoration.

Wall sections (top view) develop perfect blended light, eliminating harsh brightness.

warm-toned, friendly church is its outstanding characteristic.

The St. Stephens Episcopal Church at Longview, Washington (see page 15), another lumber capital, features the native western red cedar and Douglas fir materials with wood's natural complement, brick. Architect Lance E. Gowen, Seattle, has acquired a most interesting effect in his liberal use of these materials without overplaying the inherent warmth and folksy qualities so much a part of wood.

The main church building is framed in high-rise laminated Tudor arches of fir and the high, teepee shape makes up an almost faithful engineering section for the arches. Wide ovrehanging eaves covering a flat roof section over the main entrance makes a perfect heroic size niche for the carved statue of St. Stephen, sculpted from a laminated section. Exterior walls are of tongue-and-groove cedar. A wide-open all-glass garthex above the entrance doors frames the St. Stephen carving and seems to invite the outdoors. The

First Methodist Church, San Gabriel, California. Sandblasting of all wooden arches, decking, purlins and superstructure followed by overglazing retains texture and grain of wood in this church by Edwin Westberg of Quintin-Westberg, Architects.

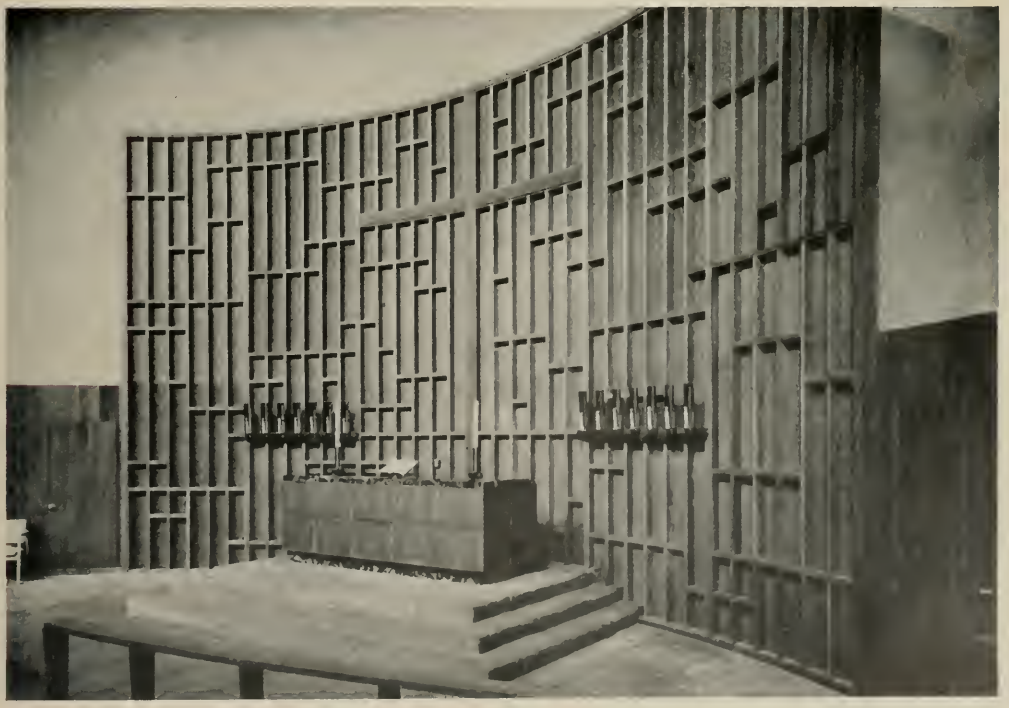
First Lutheran Church, Torrance, California (below) by Edw. David Davies, Architect and Murray K. Goldsmith, Engineer, shows large, span-free naves are no problem to achieve with modern techniques.

Lutheran Church of the Redeemer

Los Angeles, California

Blending of native stone and wood in church by Chaix & Johnson, Architects, and Brandow & Johnston, Engineers, effectively frames the full glass narthex and marks a new treatment of the wide open church.

Central Lutheran Church, Portland, Oregon. Designed by Architect Pietro Belluschi. This wooden altar screen gives more insight into the architect's gift for expression of thought with native materials. Illustration below.



First Presbyterian Church, San Pedro, California. An illusion of floating is given the upper roof section by clever arrangement of free standing Gothic arches and staggered deck sections. Armet & Davis, Architects; F. E. MacDonald, Jr., Engineer.

First Presbyterian Church, San Bernardino, California, is delightful in its simplicity of contemporary design. Culver Heaton, Architect; Serge I. Kolesoff, Engineer. (Illustrated below.)

ST. STEPHENS
EPISCOPAL CHURCH

Longview, Washington

Unusual teepee shoped roof sets this church off from most other contemporary designs. Roof overhang shelters large glass wall in narthex as well as carved wooden sculpture of St. Stephen.

LANCE E. GOWEN
Architect

Native woods play an important role inside St. Stephens with soft curved arches lending particular beauty to the church.

FIRST PRESBYTERIAN CHURCH

Fullerton, California

The flexibility of curved laminated beams is well demonstrated in this church by Architect Vincent Palmer, especially where transcept roof sections take off from roof over nave.

effect is calm and repose, yet there is a contemporary richness and splendor in the upward sweeping arch-framed roof. The wide-overhanging roof section blends the light coming in through the garthex so as to avoid any harshness from late afternoon sun from the west. There is a cathedral quality in this design achieved to a marked degree by the wise use of the engineered arches. Much of the beauty of this church interior is attained by capitalizing on the natural texture of the wood. Decking has been left exposed and allowed to weather to a golden, warm color and the side walls also carry out this theme, tying in beautifully with the exposed fir arches.

The St. Stephen church is in the center of a residential area, and the exterior cedar and brick with cedar shake roof conform to the neighboring homes.

The First Methodist Church at San Gabriel, California (see page 12, top photograph) is another example of the variations possible in western church design and demonstrates the wide flexibility of native materials in the hands of progressive designers. Architect Edwin Westberg, Pasadena, created this church from Tudor-style, laminated arches with additional decorative framing above to give added height to the roof. For variety he had the exposed decking of the roof laid diagonally and then sandblasted all exposed wood in the arches, framing, purlins and decking and over-

Wide-open churches with full glass narthex facing the street are increasingly popular as this exterior view of the First Presbyterian Church indicates.

glazed to preserve the fine characteristics of Douglas fir.

The altar wall has no penetrations for windows but receives its light from narrow windows on the side walls. These windows are shielded with redwood louvers extending the full height of the chancel. A large window at the rear lights the narthex which is separated from the nave by a wooden screen containing planters. After many years of using laminated wooden arches in his church structures, Architect Westberg says he believes the appearance of these wooden structures have so much beauty and character and texture that he leaves them exposed for this is an asset in applying various finishes.

In designing the Holy Name Church, Jefferson and Cimarron Streets, Los Angeles, Architect George J. Adams was confronted with the problem of developing a church structure to accommodate 700 worshippers on a limited area site. He had to avoid any unnecessary columns in the interior and keep the building compact. A serene and lofty area was created in the nave and over the chancel by use of trusses from front to rear and resting on the columns shown. These bearing walls support laminated wood trusses that form the shape of

SALEM LUTHERAN CHURCH

West St. Paul, Minnesota

Remarkable structural effect has been attained in this church by use of high Tudor laminated arches with roof extension which virtually eliminates the need for walls. Upper view shows the labor saving laminated beams placed in position.

ST. LUKE'S LUTHERAN CHURCH

Manhattan, Kansas

Peaceful, serene and impressive is this church with its softly curving arches flowing upward into lofty inspiring heights.

the roof, creating in effect a low-rise Tudor arch form for the roof.

An interesting combination of traditional and contemporary was developed in the exterior of this handsome church. The tile roof over the main structure is a gesture towards the traditional and the ceramic veneer around the entrance is in a bright shade of blue with gold letters and ornaments, which is strictly a modern feature.

Another excellent wide-open church with a nearly full glass wall in the narthex is the Lutheran Church of the Redeemer at Crenshaw and Westmont Boulevards in Los Angeles (see page 13, top photograph). Architects Chaix and Johnston have used stone and wood to good advantage and called upon laminated wood members for the mullions in the narthex. This is one of the more interesting contemporary western church structures and is one of many fine religious buildings designed by this firm in recent years.

Certainly the intimacy of the First Presbyterian Church of Fullerton has been enhanced by the wide-open narthex (see page 16). Here is another fine blending of wood with brick to create a friendly church home. Architect Vincent Palmer has used elliptical-type laminated arches to span a rather wide nave using a decorative roof buildup to get the desired height. He has used a half-height roman brick wall behind the chancel in fine contrast to masonry walls

(See Page 29)

Architects Ramey & Himes have attracted national attention with this church which is a striking example of contemporary western church styling, as this exterior view will indicate.

New Temple B'nai Israel

Sacramento California

KOBLICK & FISHER
Architects

LEROY GREENE
Engineer

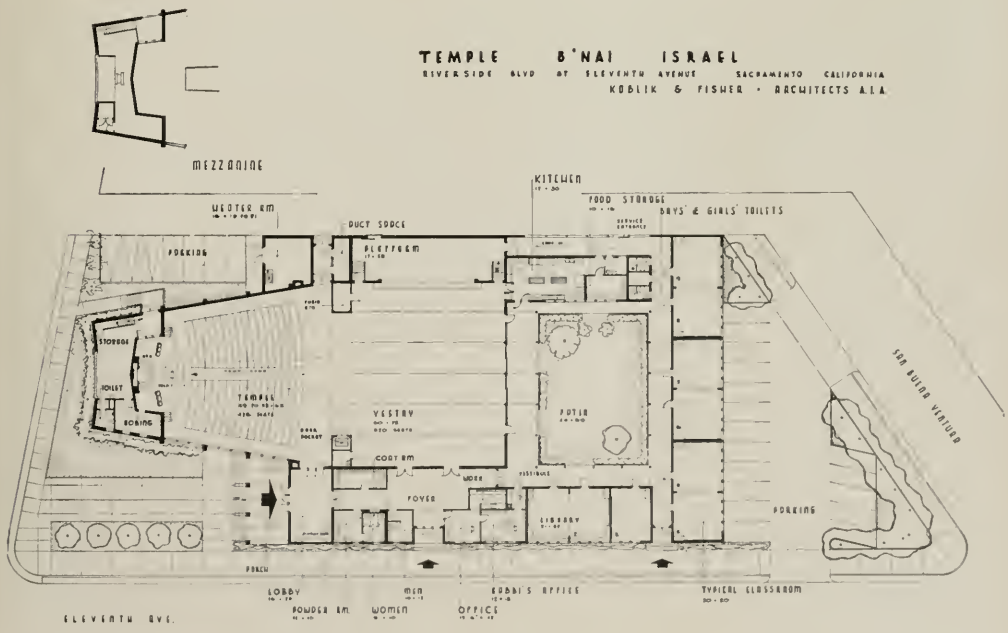
PHYSICAL CHARACTERISTICS

The Temple will provide permanent seating in pews for 416 and allow space in back of the pews for an additional 75. By opening the large doors, the adjacent Vestry Room will have a capacity of 400, thus making a total capacity for large services of approximately 900. Nine classrooms will provide facilities for approximately 180 pupils.

After extensive research and discussion, contemporary design was selected.

The building contains a Sanctuary, Almemar, Organ Loft, Vestry Room, Platform, Kitchen, Classrooms and Administration Office.

Reinforced brick construction was utilized to achieve a pleasing color and texture and to develop a structurally sound building to resist earthquake forces. The



Reinforced brick exterior wall.

brick selected is a new style over-sized brick.

The variety of floor covering is used to best serve its function, including carpet, hardwood flooring, asphalt tile, terrazo, vinyl plastic tile, and cork tile.

The Sanctuary and Vestry Room are heated by a central heating system and was designed for the future addition of air conditioning for summer cooling.

Duct system for the Sanctuary is concealed by a large platform suspended from the ridge of the room screening the ductwork and providing mounting for part of the lighting system and the sound system.

Classrooms are individually heated to allow greater flexibility for school use and community use for meetings.

The classrooms are designed with adequate daylight to insure uniform distribution of natural light, elminating the necessity of artificial illumination during most school hours. Illumination of Lobby and Kitchen is achieved by the use of plexiglas skydomes similar to those used in aircraft.

A public address system is installed in the Sanctuary and Vestry which can be used individually or in combination. This will allow transmission of sound to be used for services in the Sanctuary and for plays and lectures in the Vestry Room.

The electrical fixtures in the Sanctuary may be used at full strength or dimmed to the desired effect by a controlling panel mounted in the pulpit.

ARCHITECTURAL CHARACTERISTICS:

The main facade of the building has been oriented to the north, turning its back on the swimming pool and railroad trestle. Traffic will flow from the main

(See Page 32)

Combined use of modern materials is emphasized in the interior.

CORPUS CHRISTI CHURCH

San Francisco California

Clarion and Voice Performance System

By
J. CARTER PERKINS, JR.
Chief Engineer*
Monson Electric Co.

MARIO CAMPI
Architect

Architect's exterior design provides unusuol motif as seen from the street as well as when viewed from the inside.

The quickening interest in church activities today is shown by the new church edifices being dedicated, and the renovation of existing church buildings to serve an expanding group of members. An increasing number of churches are employing the medium of electronics to extend the beauty of the service to all parts of the church, and to carry the message of the bells to all corners of the parish. An excellent example of the use of modern sound equipment in churches today is the electronic carillon and voice reinforcement system recently installed in the Corpus Christi Church of San Francisco. This church, designed by architect Mario Campi of San Francisco, features striking functional modern architecture as shown in the accompanying photographs.

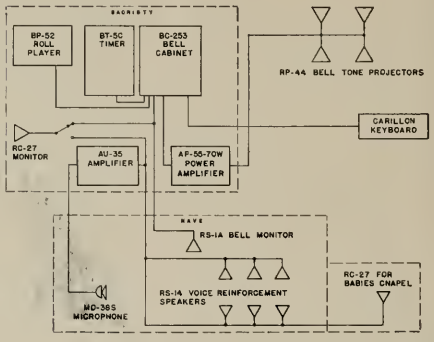
During the early planning stages, consideration was given to incorporating bell equipment. The traditional cast bells were, of course, immediately ruled out be-

Heart of system is located in Socristy. Automatic roll player sits on counter top to left. In center is bell cabinet; matching cabinet to right contains clock and timer mechanism.

Wiring Plan →

cause of their exceedingly high cost and their immense weight. Such bells weigh many tons and require a specially reinforced tower to house them. In addition, the proper operation of a cast bell carillon requires the services of a highly trained carillonneur. The modern electronic carillon is designed to overcome these objections and still retain the authentic tones as produced by cast bell carillons.

A wide variety of carillons and automatic bell equipment is manufactured today to cover nearly every conceivable application. The equipment selected to meet the needs of Corpus Christi consists of a twenty-five note Louvain carillon, a Bell Master roll player, and the automatic Cathedral Bells clock and timer mechanism. In addition to the standard manual playing of



Lower two-octave keyboard is that of the carillon, rigidly mounted to organ console.

Piano type keys close electrical contacts to solenoid operated bells in bell cabinet in Sacristy 225 feet away from organ loft.

Organist may select either indoor or outdoor speakers.

Slim pencil-style microphone is shown mounted on the pulpit.

Additional outlets are provided for plug-in microphones within the sanctuary at the altar on opposite side of pulpit.

the carillion at the keyboard, the auxiliary equipment provides clock-controlled automatic playing of the bells, striking of the hours and Westminster Chimes, daily ringing of the Angelus and operation of a Sunday call-to-worship bell preceding each Mass. A complete prearranged weekly schedule for automatic operation of the system is set up on the seven-day clock including night silence periods.

The bell tones of the carillons are produced by small metal hammers striking an array of accurately tuned tone bars. The vibrations thus produced are converted to electrical energy through the use of variable reluctance type, electro-magnetic pickups. This energy is approximately equivalent to the output level of the average dynamic microphone; therefore, power amplifiers are required to obtain sufficient drive for a group of horn type loudspeakers for outdoor use.

At the Corpus Christi installation a single power amplifier converted to 70 watts output is being used to drive four bell tone projectors. The projectors are mounted on a six foot platform erected on the roof of the church; one projector pointing in each of the four major directions thus giving excellent coverage over the surrounding neighborhood. In a front corner of the nave mounted next to the ceiling there is a small horn type speaker used as a bell monitor. The sound volume on this speaker is kept quite low thus giving the bell music within the church a distant quality. Very pleasing effects are obtained when the bells are reproduced on this speaker in accompaniment to the organ.

The block diagram pictures the schematic layout of the carillon sound system showing the relative locations of the various components. This diagram also shows the layout of the voice reinforcement system within the church. Actually, this is a completely separate system aside from the connection at the monitor speaker in the Sacristy.

The primary purpose of any voice reinforcement system is to achieve the illusion that each worshipper in his place can hear comfortably the original voice

(See Page 31)

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WASHINGTON STATE CHAPTER

Floyd Naramore, F.A.I.A., spoke at the December meeting on his architectural observations during a recent trip around the world. Among subjects discussed and shown in color slides were: the Temples of Japan and Thailand; Angor Wat, Cambodia; Benares, Delhi, Agra (the Taj Mahal) and the Vale of Kashmir, India; the dead city of Petra in Trans-Jordan; temples, tombs and their treasures in Egypt.

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EAST BAY CHAPTER

"Bidding Procedure and Agreed Standards of Practice" was the subject of general discussion at a recent meeting. Subjects coming under consideration included "Bid Peddling," "Present System of Bidding," "Close Margins of Time in Bidding—Resultant Errors," Segregated Bids," "A Uniform Bidding Law," "Qualifications for Bidders," "Has Bonding Lost Its Value," "Rebid or Take the Next Low—the Supreme Court Ruling," "Rejection of Sub-Contractors," and "Suggestions for House-Cleaning."

UNIVERSITY OF OREGON DEAN APPOINTED TO A.I.A. COMMITTEE

Announcement has been made of the appointment of Dean Sidney W. Little of the University of Oregon School of Architecture and Allied Arts, to the National Committee on Education of the American Institute of Architects. Dean Little will represent the Northwest regional district of the Institute and will be one of the nine committee members in the nation.

This committee is one of the most important in the Institute and is responsible for the development of long range educational objectives. These include, education for the practice of architecture, reporting

Orange County Chapter:
Philmer J. Ellerbroek, President; John A. Nordbak, Vice-President; Chas. A. Hunter, Treasurer; Gates W. Burrows, Secretary. Directors: Everett E. Parks, Chas. A. Hunter and Everett L. Child. Chapter office 1606 Bust St., Santa Ana.

Oregon Chapter:
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Pasadena Chapter:
Wallace C. Bonsall, President; Henry C. Burge, Vice-President; George A. Schaffer, Secretary; Robert S. Cook, Treasurer. Office of Secretary, 42 S. Altura Rd., Arcadia.

San Diego Chapter:
Victor L. Wulff, President; Richard L. Pinnell, Vice-President; Edward G. Holliday, Secretary; Delmar S. Mitchell, Treasurer. Directors, Donald Campbell, Jack R. Lewis and Louis A. Dean. Sec'y Office, 4562 Boundary St., San Diego.

San Joaquin Chapter:
John P. Miller (Fresno), President; Byron C. Brodrick (Fresno), Vice-President; Allen Y. Lew (Fresno), Secretary; Lloyd J. Fletcher (Visalia), Treasurer. Directors, Wm. G. Hyberg, Robert C. Kaestner, Maurice J. Metz. Sec. Office, Fulton-Fresno Bldg., Fresno.

Santa Barbara Chapter:
Lewis A. Storrs, President; Lutah Maria Riggs, Vice-President; Robert Ingle Hoyt, Secretary; Roy W. Cheesman, Treas. Corresponding Secretary: F. Raymond Ford, 238 La Marina, Santa Barbara.

Southern California Chapter:
Ulysses Floyd Rible, President; Kemper Nomland, Vice-President; Francis Merchant, Secretary; William Woollett, Treasurer. Offices, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter
Nelson I. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Robert H. Wohleb, 2nd Vice-President; Gordon N. Johnston, Secretary; Robert A. Parker, Treasurer. Directors: Silas E. Nelsen, Lyle N. Swedberg.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
John S. Detlie, President; Ralf E. Decker, 1st Vice-President; Edwin T. Turner, 2nd Vice-President; Wendell H. Lovett, Secretary; Arnold G. Gangnes, Treas. Directors Paul Thiry, William J. Bain, J. Emil Anderson and Robert B. Price. Dayis Holcomb, Ex-Sec., 409 Central Bldg., Seattle 4.

Spokane Chapter:
Tom Adkinson, President; Carroll Martel, Vice-President; Harry Weller, 2nd Vice-President; William James, Secretary; Lawrence Evanoff, Treasurer. Office of the Secretary, W. 524 - 4th Ave., Spokane.

Hawaii Chapter:
Kenji Onodera, President, 3518 McCorriston St., Honolulu, T. H.; George J. Wimberly, Secretary, 315 Royal Hawaiian Ave., Honolulu, T. H.

CALIFORNIA COUNCIL OF ARCHITECTS
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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank S. Gerner, President; Frank L. Bersotti, Vice-President; Hugh D. Missner, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard Street.

Producers' Council—Southern California Chapter:
Bert Taylor, President, Pittsburgh Plate Glass Company; G. Robert Roden, Jr., Vice-President, Truscon Steel Company; Malcolm G. Lowe, Secretary, Natural Gas Equipment Inc.; Richard Seaman, Treasurer, W. P. Fuller & Company; Vern Boget, National Director, Gladding McBean & Co.

Producers' Council—Northern California Chapter (See Special Page)

activities and discussing problems of architecture and education, with recommendations to the profession concerning guidance for student and teacher training courses.

Dean Little's appointment follows the publication of a two-volume survey published in June, 1954, titled "The Architect at Mid-Century." This document is a published report of a commission whose work of the past three years was devoted to statistical and philosophic research on the education and registration of architects in this country. Dean Little is the only member of this survey commission now on the Education Committee. Recommendations made by the commission to the architectural profession will form the basis of this committee's action during the year.

The Education Committee of the institute is also charged with an advisory responsibility to the American Institute of Architects in dealing with disposition of research funds and the problems arising from sub-professional and pre-professional education activity.

The committee meets several times during the year, usually in Washington. Dean Little will leave in a few days for the nation's capital to attend the first session of this group.

PASADENA CHAPTER

Jack Morris, president of the Harold E. Shugart Company, acoustical engineers and contractors, was the principal speaker at the December meeting.

He discussed the "control of sound" in its many ways and ramifications.

NEW MEMBERS: S. David Underwood and Sidney Goldberg.

OREGON CHAPTER

"The Need of Parks in Suburban Developments" was the subject of a talk by Harry B. Buckley, Super-

(See page 33)

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Structural Engineers Association of Northern California

Michael V. Pregnoff, President; Howard A. Schirmer, Vice-President; James L. Stratta, Secretary; William K. Cloud, Treasurer; Cecil H. Wells, Jr., Ass't Secy. Directors: Robert D. Dewell, William H. Ellison, Wesley T. Hayes, Jack Y. Long. Office Sec., 251 Kearny St, San Francisco.

Structural Engineers Association of Central California

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American Society of Civil Engineers Los Angeles Section

Office of Secy, 3066 Engineering Building, University of California, Los Angeles 24. BRANCHES: Orange County Branch, Harold Sprenger, Pres; Raymond R. Ribal, V-P; Earl K. Burdick, Sec-Tr, 12311 Chapman, Anaheim. San Bernardino-Riverside Counties Branch, Albert A. Webb, Pres; Wright M. Price, V-P; John L. Merriam,

AMERICAN SOCIETY OF CIVIL ENGINEERS—S. F. Section

The December meeting was devoted to a discussion of the Bay Barrier Salinity Control and developed several versions of the salinity control of the San Francisco Bay water in its various reaches, with Herbert Howlett, California Department of Public Works, the principal speaker.

The program was in charge of Bill Moore, Program Committee Chairman.

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STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"Men, Steel and Earthquakes" was the subject of a motion picture shown at the December meeting in the Engineer's Club, San Francisco. Showing of the film was followed by a general discussion on the subject.

The following new members were announced: Ross W. Rudolph (Affiliate), Burr H. Randolph (Member), Dean M. Carpenter (Affiliate), and Nels C. Ring (Member).

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

"Earthquakes and Building Construction" was the subject of discussion at the December meeting, held in the Presidio Officers Club, with Karl V. Steinbrugge and Perry Byerly the principal speakers.

Steinbrugge, Structural Engineer, is in charge of the Earthquake Department of The Pacific Fire Rating Bureau, and Byerly is professor of Seismology and director of Seismographic Stations at the University of California.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

"Structural Steel Designing" was the subject of the December meeting held in the Rodger Young Auditorium, Los Angeles, with consideration being given to two phases of the work.

"Modern Designing with Steel" was discussed by P. J. Osborne, manager of Engineering Sales, Kaiser Steel Corpn., and "New Trends in Structural Steel Design" was discussed by John A. Blume, Consulting Structural Engineer of San Francisco.

Osborne have the history of steel in the far West, and described the progress of steel production here. In 1936, we produced only 30 per cent of our requirements – in 1953 more than 60 per cent of our requirements were produced here.

Sec-Tr; 4865 Park Ave., Riverside. Ventura-Santa Barbara Counties Branch, Robert L. Ryan, Pres; Richard E. Burnett, V-P; George Conahey, Sec-Tr, 649 Doris St., Oxnard.

American Society of C. E.
San Francisco Section
John E. Rinne, President; H. C. Wood, Vice-President; R. D. Dewell, Vice-President; H. C. Medberym, Secretary; R. C. Clark, Treasurer. James E. McCarty, Jr., President of Junior Forum. Office of Sec., c/o S. F. Water Dept, Millbrae, Calif.

Structural Engineers Association of Southern California
William T. Wright, President; Henry M. Layne, Vice-President; C. M. Corbit, Jr., Sec.-Treas. Directors: Wm. T. Wright, Henry M. Layne, C. M. Corbit, Jr., Ben Beniaff, Harold P. King, Robert J. Kadow, Harold Omsted, R. W. Binder and J. G. Middleton. Offices, 121 S. Alvarado St., Los Angeles 4.

Structural Engineers Association of Oregon
Lewis R. Ellingwood, President; Robert M. Bonney, Vice-President; Sully A. Ross, Secretary-Treasurer. Directors William J. Dorner, Roger V. Gillam, Leslie E. Poole, Rowland S. Rosé. Offices 706 Board of Trade Bldg., 310 S.W. 4th Ave., Portland 4.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer. Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary. Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military Engineers—San Francisco Post
COL Paul D. Berrigan, President; CDR Paul E. Seufer, 1st Vice-President; CAPT H. H. Bagley, 2nd Vice-President; Robert P. Cook, Secretary; Hiram F. Scofield, Treasurer. Directors: C. E. Bentley, F. R. Fowler, COL E. H. Ingram, E. H. Thouren, LTCOL C. S. Lindsey, L. L. Wise, and RADM C. A. Trexel.

Welding techniques have been improved, and tonnage has been conserved by designing tapered sections to stress calculations. Where steel is exposed, welded tapered sections are a great improvemnt in attractiveness. The State of California reports savings of up to 20 tons of steel per bridge by using tapered sections.

Blume dwelt on new shape developments, and referred to Kaiser Steel's publication of literature on the box column section. Additional brochures will be published on new developments. Mr. Blume will advise Kaiser on editorial content so that structural engineering offices will find them readily adaptable to design.

He described the great energy absorbing ability of steel, and cited as an example a 14 story structural steel building in San Francisco with design factors of only ½%G which stood the 1906 earthquake with but minor damage. The building is still in use. The ductility and toughness of structural steel protects the more brittle building materials common in multi-story construction. Mr. Blume emphasized that although ½%G was sufficient in this case to avoid destruction, it was faulty design by modern practice.

Blume detailed a fully welded steel constructed wind tunnel (one of eight) 44" in diameter, with steel plates varied in thickness from ¾" to 4½". The tunnel receives a thrust of 220,000 horsepower. Nine types of steel were used, and as many welding techniques. He gave the Equitable Life Assurance Society's new 25 story office building in San Francisco as an example of the latest trends in steel design. It is unique in the use of tapered columns and tapered spandrel beams.

FEMINEERS

At the annual election of officers of the FEMINEERS, the following were named to serve during the new year:

Mrs. E. Kenney McKesson, President; Mrs. John Fies, Vice-President; Mrs. Victor R. Sandner, Secretary, and Mrs. Fred Nicholson, Treasurer. Mrs. Leslie W. Graham and Mrs. J. A. Paquette were elected Directors.

The FEMINEERS, representing wives of engineers, meet each month, usually at the Elks Club in San Francisco.

NATIONAL ENGINEERS WEEK

By proclamation of President Eisenhower, the week

(See page 32)

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PRODUCER'S COUNCIL PAGE

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ANNUAL XMAS JINKS

The twenty-third annual Xmas Jinx was held in the Terrace Room of the Fairmont Hotel, San Francisco, on December 2nd. More than four hundred architects, engineers and producers' Council members attended the very successful affair.

Entertainment consisted of some very fine singing during the dinner by Howard Noleen and friends.

MEETING NOTE:

The January "Informational" meeting of the Producer's Council will be held on January 10th, 1955, at the Palace Hotel. Mr. Robert Woodward of the Glidden Company will be the guest speaker. His subject, "New Painting Specifications and Product Guide for Architects." Slides will be shown.

USE QUALITY PRODUCTS — MANUFACTURERS OF QUALITY BUILDING PRODUCTS — THE PRODUCERS' COUNCIL — CONSULT AN ARCHITECT

CHURCH ARCHITECTURE

(From Page 18)

and natural wood in the arches, purlins and decking. In the design of the transcept, Architect Palmer has graphically demonstrated the flexibility of the curved laminated arch. The arch structure forming the ceiling of the transcept conforms beautifully with the line of the main arches forming the ceiling over the nave and the first arches in the transcept shape the break in the ceiling of the main structure where the transcepts join.

A remarkable variation in church interior design has been created in the First Presbyterian Church of San Pedro, California (see page 14, top photograph), by Architects Armet and Davis, of Los Angeles. A series of laminated Gothic-type arches stand free from the main roof and building structure, the base of the arches forming the outer aisles. A sloping deck section resting at the base on the brick wall on either side of the nave extends upward to rest on heavy purlins set between the arches two thirds of the way to their apex. A free area above these deck sections is formed by a short support strut set in the apex of the arch which supports the upper portion of the main roof section. Indirect lighting from above creates a tranquillity and lofty impressiveness in keeping with this unusual structure, and gives the appearance of floating to the smaller exposed roof section.

Pasadena architect, Edward David Davies, has introduced some interesting ideas in his design of the First Lutheran Church of Torrance, California (see page 12, bottom photograph) which again demonstrates the wide range of possibilities available to the modern architect who makes the most of new materials and new techniques. Using a low-rise Tudor arch, Architect Davies was able to span an extra wide nave without need for posts. These arches were shaped and built up from Douglas fir to meet the exact requirements for this job. The base of the exposed arches form one side of the outer aisles, support a low decking ceiling above the aisles above which is a clerestory installation the full length and on either side of the nave.

There is a simple dignity and refinement in the First Presbyterian Church of San Bernardino (see page 14, lower photograph) which is a fine tribute to its designer, Architect Culver Heaton. There is a delightful simplicity about this church interior, accomplished by combining the best qualities of wood, brick and masonry in a pleasing affinity. Flat laminated fir arches create a lofty serenity which is further defined by the vertical column suggestions in the brick and masonry walls. This is an interesting use of contemporary design ideas without affront to expected traditional conservatism found so often in larger church buildings.

While not strictly a western church, but showing the influence of western design trends, the St. Luke's Lutheran Church of Manhattan, Kansas (see page 18), has attracted national attention. Architects Ramey and Hines, Wichita, Kansas, have achieved a delightful, refreshing and cheerful contemporary church form which embodies many new features yet expresses the dignity of man and the spiritual side of his nature usually identified with religious ceremony.

Here is a completely functional church but a structure with beauty and life predominant. The architects give considerable credit to the materials they used. They say they used laminated fir arches and purlins to express the structure in an honest and interesting manner and make the structural framing an integral part of the character of the church building. The laminated arches, they point out, gave them complete freedom of design, and the arches they selected were used to give a feeling of height in smooth, flowing lines. They believe the natural wood selected gives a warm, pleasing feeling which blends with the brickwork and paneling in the chancel.

These efforts to establish a convincing contemporary form for religious structures as illustrated in the foregoing examples is one of the refreshing stirrings in the creative talents of western architects. For years traditional and ritual requirements have tended to restrict church design to rather narrow confines. These lovely western churches we have discussed are living proof that wise and intelligent use of modern materials and

(See Page 34)

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PERSONALITIES

ROY DRACHMAN
DEVELOPER

Tucson, Arizona

Roy Drachman was born in Tucson, Arizona, where he attended elementary schools, high school, and graduated from the University of Arizona.

Became interested in real estate development, with parcticular emphasis on Shopping Centers; also active in subdivisions and is a real estate broker and counselor with present operations extending over the entire Southwest.

ROY DRACHMAN
Developer-Consultant

Drachman serves as real estate consultant for the Del Webb Construction Company, involving enterprises from Denver to San Diego. He developed the Swanway Shopping Center at Tucson and is now building the Uptown Plaza at Phoenix.

Leasing Agent for San Manuel, located 47 miles from Tucson, owned by Magma Copper Company, involving the construction of entire new townsite and comprising 2500 acres, with an expected population of 8,500. Planned for 2500 homes, of which 1000 are already built. There will be two shopping centers, one already in operation.

Assembled 22,000 acres for Hughes Aircraft Company, on which they have built a $15,000,000 plant at Tucson.

Member Urban Land Institute. Has participated regularly in clinics for consideration of urban development and the planning of shopping centers.

On Executive Board of Realtors Committee for Legislative Observation of Realty Matters in Washington, D. C.; Member of National Association of Realty Boards; and Member of National Association of Commercial Realty Brokers, engaging in clinical discussion annually for urban development.

NEXT MONTH—William C. Harr, General Contractor, San Francisco.

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BIGGEST BUILDING BOOM

(From Page 5)

we must begin now to find ways of providing proper community facilities such as schools, trunk sewer lines, fire and police protection and hospitals. Today's soaring birth rates—an estimated 4,100,000 new Americans were born in 1954—are plain proof that we need many, many more classrooms today to house our children. By 1960, that need will have risen to 700,000 classrooms unless we act now. Congress has made a start in the right direction this year by providing in the new housing bill a provision allowing FHA to insure mortgages on houses to be used temporarily as school rooms. Next year, certainly, we hope to make greater progress on a program that will help builders and communities to obtain adequate schools and other community facilities.

I am confident that the home building industry will rise to meet these challenges of the future, because the real opportunity, the real housing boom, lies ahead, not behind us.

ARCHITECTURAL FIRM ORGANIZED

William H. Taylor, A.I.A., Kenneth M. Nishimoto, A.I.A., George S. Connor, architect, and R. Lynd Warren, have announced the formation of the firm of Taylor, Warren, Nishimoto & Connor with general offices at 285 S. Los Robles, Pasadena, and 8323 La Bajada Ave., Whittier.

Warren will serve as office manager of the firm which will engage in the general practice of architecture.

SAN DIEGO WAL BIRTHDAY

The Women's Architectural League of San Diego will observe its fifth birthday on January 19, 1955. The organization has been particularly busy since its organization in stimulating public interest in the practice of architecture throughout San Diego county.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

George A. Sedgwick, president, announces the 1955 annual convention of the Structural Engineers Association of California, will be held on October 6-7-8 in Yosemite Valley.

Ted Newman has been selected Chairman of the Convention.

CORPUS CHRISTI

(From Page 23)

and not the amplified voice. In most conventional style churches one or more loudspeakers are located above or at the sides of the procenium arch; however, the unconventional architecture of Corpus Christi, which has no arch, called for unconventional speaker locations. Above the grating which conceals the light fixtures, the walls of the nave curve in a sweeping arc to meet the roof of the building, with a false ceiling suspended at the level of the grating over the main body of the church. The horn type speakers for the voice reinforcement system are concealed well above the light grating at the edge of the suspended ceiling and are pointed at the smooth curved section of the walls. The sound is thus reflected down and into the pews in a broad nondirectional pattern. Three speakers on either side of the church were required to obtain complete coverage; the individual sound levels of each being adjusted to blend into a smooth even sound field.

At the rear of the church there is a glassed-in Babies Chapel where parents with young children can sit without fear of disturbing the congregation. The service is carried to this room on an 8-inch cone speaker identical to the monitor speaker in the Sacristy.

Although the importance of good acoustics is widely recognized by architects today, a good quality voice reinforcement system makes a significant contribution toward greater understanding and appreciation of the worship service. Good acoustics make the sound engineer's problems much easier. In addition to the commendations due Mr. Campi and his associates, recognition should also be given for the excellent electrical engineering to the office of the late Charles Von Bergen, now managed by William Labe, and the Galvin Electric Company of San Francisco, electrical contractors.

**NOTE—The author of this article, J. Carter Perkins, Jr., is Chief Engineer of the Monson Electric Company, and is engaged in acoustic consulting, sound equipment systems design and engineering; formerly nine years design, engineering and research experience with Stromberg-Carlson Company, Rochester, New York. B.S. in Physics, University of Rochester, New York. Also attended University of North Carolina, Chapel Hill, North Carolina.*

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NEW TEMPLE B'NAI ISRAEL

(From Page 20)

lobby into the Sanctuary side, allowing both large rooms to be opened into one great hall.

The Sanctuary features the Ark, sacred resting place of the Torahs, or Scrolls.

The Vestry or Social Hall, has its own entrance on 7th Avenue so that gatherings may occur without going through the Temple lobby. Toilet facilities are adjacent to both the Temple lobby and the Sanctuary lobby.

The Social Hall will seat 600 for a lecture and seat 420 for a banquet,

The platform, located on the south of the Social Hall, is connected by a ramp to the classroom wing. Classrooms thus become dressing rooms for stage productions.

Adjacent to the Social Hall is the Kitchen which also serves the patio. The classrooms surround an interior patio forming an intimate garden with the Social Hall. The classrooms have a separate entrance on the western portion of the property.

Provisions have been made for the addition of a second story classroom unit of nine rooms to be added when required.

The classrooms are designed in tandem with moveable partitions so that they may be used for large meeting rooms seating approximately 200 people.

The Almemar, which corresponds to the Altar of a Church, is dramatically lighted by a tall obscure glass window on the south. The Sanctuary walls are paneled in walnut veneer. The three large colored north windows were designed in an abstract pattern. Each large window carries a smaller stained glass window which was removed from the old Temple on 15th Street.

GENERAL INFORMATION:

The estimated cost of the building, including furnishings, is $350,000.00.

The total square foot area is 21,660.

WITH THE ENGINEERS

(From page 27)

from February 20 to 26, 1955, has been designated as "Engineers Week."

Purpose of the week is to focus public attention on the Engineer and the important role he plays in the economy of the nation.

PICTURE CREDITS:—Timber Structures, Inc., Cover, Page 10, Page 11 (top), Page 17; B. J. Allen, Page 11 (bottom); Summerbell Roof Structures, Page 12, Page 13 (top), Page 14; Clay Brick & Tile Ass'n., Page 19, Page 20; Robert Graham, Page 21, Page 22, Page 23; Stromberg Carlson Co., Page 21, Page 22, Page 23; Photo-Art Commercial Studio, Cover, Page 11 (top), Page 15; Roberts Studio, Page 12 (bottom); Carleton Rust, Page 17 (bottom).

A.I.A. ACTIVITIES

(From page 25)

intendent of the Bureau of Parks for the City of Portland, at a recent meeting.

Buckley, a graduate forester and member of the American Institute of Park Executives, declared, "According to very conservative estimates, there should be a minimum of one acre of recreation space for every three hundred persons. Such a standard has been met in our generation in America by regional cities like Kansas City, Indianapolis, and Portland, Orgon," and quoted Lewis Mumford's "The Culture of Cities" as an authority on the subject.

SAN DIEGO CHAPTER

The annual Christmas party was observed at the December meeting, held in Lona Kai Club, with everyone in attendance reporting the dinner and dancing an outstanding success.

C. W. KRAFT HONORED BY AMERICAN STANDARDS ASSOCIATION

C. W. Kraft, president of Kraftile Company, Niles, California, was recently named one of the three men in the United States who have contributed most to the American economy through the advancement of Modular Measure, and in recognition was presented a special award at the Fifth National Conference of Standards recently held in New York City.

C. W. KRAFT
President Kraftile Co.

Kraft was recommended to the American Standards Association for this high award by a joint committee representing the National Association of Home Builders, the American Institute of Architects, and the Producers Council.

Modular Measure is a system of coordinating the designer's dimensions for a building with the actual unit sizes of the materials of which it is to be constructed. This is accomplished by using the American 4-inch module as the least common denominator when setting up the dimensions of a building or when fixing the stock sizes of a building product.

The American Standards Association is the national clearing house for voluntary engineering, industrial, safety and consumer standards. It is made up of 115 technical societies, trade associations, consumer groups, and 2300 individual company members.

RESEARCHERS TO STUDY MODULAR MEASURE ECONOMIES

A reliable method of reducing building costs will be given prominence this winter by the Building Research Institute which is meeting in Washington, D. C., in December to formulate plans for the project.

"Modular Measures have been coming into wider use ever since World War II and there are many reports from contractors throughout the country that it is already cutting construction costs," declared William H. Scheick, executive director of the Institute. He also pointed out that the Institute "believes the need now exists for a research conference to evaluate its performance to date and to indicate new ways by which Modular Measure can reduce the price paid for buildings by the American people."

Participants in the Building Research Institute Conference will include general contractors, manufacturers, builders and architects. It will be the eighth major research conference conducted by the Building Research Institute of the National Academy of Sciences.

Among those scheduled to take part in the program are: Max H. Foley, of Voorhees, Walker, Foley & Smith, architects and engineers, New York City; Edward X. Tuttle, vice-president, Giffels & Vallet, Inc., L. Rossetti, associated engineers and architects, Detroit, Mich.; J. P. Caldwell, vice-president, J. A. Jones Construction Co., Charlotte, N. C.; James E. Coombs, president, Baker & Coombs, general con-

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tractors, Morgantown, W. Va.; John R. Magney of Magney, Tusler & Setter, Minneapolis, Minn., architects and engineers; Gannett Herwig of LaPierre, Litchfield & Partners, New York, architects.

W. S. Kinne, Jr., professor of architecture, University of Illinois; William Gillett, vice-president, Detroit Steel Products Co., and president elect of the producers council; and Norman J. Schlossman of Loebl, Schlossman & Bennett, Chicago architects.

Modular Measure is a new, improved way of dimensioning building, and simply uses a 4-inch unit of measuring of buildings and uses 1/16th of an inch as its smallest unit. Manufacturers of building materials are now changing to stock sizes that are multiples of 4 inches. These modular-size materials fit together with utmost ease and efficiency when used in a building that has been planned by Modular Measure.

This increased construction efficiency means lower building costs. Present experience with Modular Measure indicates it can save the American people five billion dollars a year in the cost of new buildings. These savings result from less time wasted cutting and fitting materials at the construction site, less pieces of new material cut off and thrown away, quicker drafting of the blueprints, fewer building product sizes to be carried in stock, and countless other ways.

The basic significance of Modular Measure is that it is an essential part of the present trend toward industrialization of the construction industry, and industrialization calls for factory-fabrication of building parts, which are then distributed and stocked until ordered, finally delivered to the building site and assembled there. Modular Measure encourages economical use of standardized building materials; it does not result in standardization of design. The 4-inch module is small, gives the designer ample freedom. Modular colonial-style houses, Modular gothic churches, Modular contemporary schools and hospitals are already in existence.

The program is being jointly sponsored by The American Institute of Architects, The Producers Council, the National Association of Home Builders, and the American Standards Association. The program is also being supported by the Associated General Contractors of America, the Chamber of Commerce of the United States, the Building Research Institute and the Association of Collegiate Schools of Architecture.

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CHURCH ARCHITECTURE

(From Page 29)

modern techniques can produce the desired atmosphere of quiet devotion and traditional mystery long associated with religious worship.

It is probably correct to say that this fascinating new trend in concept of religious buildings shows a reverence on the part of these architects for nature and a new understanding of the materials it provides. There is a greater appreciation evidenced for regional conditions and traditions as well as a determination to use the best of native materials. Then, too, the search for individual solutions for various design problems has opened up unexpected opportunities for expression which we believe adds excitement and renewed interest on the part of the layman.

Probably the greatest contribution these architects are making to western culture is proving that man's sanctuary need not be a gloomy, awesome, forbidding place of ancient traditions, but can be spiritually uplifting in an atmosphere of warmth, serenity and cheerful quiet.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

ABSTRACTS ON CORROSION — 3rd Volume. National Association of Corrosion Engineers, 1061 M & M Bldg., Houston 2, Texas.

A 364-page book, contains 3512 abstracts of articles and books on corrosion from more than 500 periodicals from all over the world; abstracted by some 30 agencies that authorize NACE to use their abstracts. This 3rd volume contains summaries of articles and books published in 1948-49, topically indexed and cross-indexed and with both alphabetical subject and author indexes. The two previous volumes covered articles published in 1945 and 1946-47.

BIBLIOGRAPHY ON PRESTRESSED CONCRETE. American Concrete Institute, 18263 W. McNichols Rd., Detroit 19. Price $2.00.

The American Concrete Institute has published this book of 86 pages as a part of the work of the ACI-ASCE Committee 323 on Prestressed Reinforced Concrete. The book lists 2,000 American and foreign literature references on the subject of prestressed concrete which have been published from 1896 through 1953.

A separate section lists some 60 United States, British, German, and French patents. Students, architects, engineers and builders will find this material a valuable addition to their technical libraries.

NEW DESIGN IN EXHIBITIONS. By Richard P. Lohse. Frederick A. Praeger, Publisher, 105 W. 40th Street, New York 18. Price $13.50.

A basic book on modern exhibition and exhibition architecture, fully illustrated, draws upon the finest work of architects and artists in the United States, England, France, Italy, Germany, Holland, the Scandinavian countries and Switzerland done in the past twenty years.

Contains more than 600 photographs, plans, structural details and descriptive text on outstanding examples of modern exhibition design. Introduction describes exhibition techniques, themes, and form of pioneers in the field from 1851 to 1930.

Major portion of book illustrates national, industrial, small manufacturing, scientific, cultural, social and political exhibitions of many types ranging from the Finnish Pavilion at the 1937 Paris Exhibition Universelle to the "Good Design" exhibition at Chicago's Merchandise Mart in 1950; from the exhibit of Medieval Italian goldsmiths at the Triennale di Milano in 1936, to the Haus Berlin exhibition at Hanover in 1951. The author is a Swiss architect, specializing in exhibition design.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

"Arislide Aluminum Sliding Windows." A 6-page, 8½x11 in. folder (A.I.A. File No. 16-E-1-7-54) describing in detail the new line of Arislide windows for residential and commercial use. All sizes in the line have nail-in anchor fins eliminating wood surrounds or frames, with consequent reduction in installation costs. Windows may be nailed directly into studs; nail holes are provided; weather stripped all four sides with durable mohair and plastic; double weather stripping used at head; nylon bottom rollers provide smooth, quiet operation; easily removable from inside for washing or replacing glass; shipped assembled or knocked down for maximum freight savings. Copies available, write DEPT-A&E, Michel & Pfeffer Iron Works, Inc., 212 Shaw Road, South San Francisco.

Panel for curtain wall construction. A 6-page, catalog-type folder (A.I.A. File 15-H-2) describes the new Davidson "Double Wall" panel for curtain wall construction, and its flexibility to fit any type fenestration or spandrel system; contains detailed information on the architectural porcelain construction and installation, and explains advantages for freedom of building design and speedy erection; describes, with cross-sectional drawings, two types—Panel A is manufactured in sizes up to 12 sq. ft. with thickness from 1½" to 3'; has fiberglass insu-

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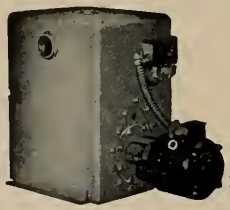

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lation and an air space to minimize condensation and allow the wall to breathe; Type C is produced in sizes up to 20 sq. ft. in any thickness of 2⅛" and over, and has a special shrink-proof, gypsum-base Vitrock backing, cast integrally with the outer panel for "straight-edge" flatness, rigidity and added insulation against sound. Write for complete data DEPT-A&E, Davidson Enamel Products, Inc., 1100 E. Kibby St., Lima, Ohio.

Lightsteel structural sections. A new 16-page, 2-color brochure (A.I.A. File No. 13-G) describes the use of Penn Metal Products in residential, commercial, institutional, and industrial construction; describes products, illustrates uses, specifications chart and engineering data. For free copy, write DEPT-A&E, Northill Steel Co., Inc., 4920 - 15th Ave., Sacramento, Calif.

Good lighting is good business. A new booklet on office lighting, written by two Sylvania lighting engineers with extensive experience in the lighting field; is a factual treatise covering the economics and mechanics of good office lighting; written in non-technical terms, covers such subjects as layout and planning, maintenance, room finishes and color, quantity of light, fluorescent vs. incandescent, light distribution, natural lighting, and various lighting systems; also included is a section on recommendations for lighting areas other than general offices, including private offices, conference rooms, drafting rooms, reception areas, mail and filing rooms, corridors and hallways, and wash rooms. The book has numerous photographs of modern lighting techniques and also some pictures of poor installations for comparisons; charts of recommended values of illumination in terms of foot candles; combination sound reduction-illumination systems are also discussed. For free copy write DEPT-A&E, Sylvania Electric Products, Inc., 1740 Broadway, New York 19, N. Y.

Mosaic clay tile western color catalog. New 8-page catalog presents all Mosaic clay tile manufactured by Jordan Tile Co., Corona, California. Included are glazed wall tile, ceramic, velvetex and granitex mosaics, everglaze tile and carlyle quarry tile; complete data on shapes, sizes and trim, and illustrates a popular group of accessories for kitchens and baths. Free copy, write DEPT-A&E, Mosaic Tile Co., 829 N. Highland Ave., Hollywood 38, Calif.

Console heaters. A completely new styling and wide range of colors are shown in the new brochure (A.I.A. File No. 30-C-43) of the Herman Nelson line of console heaters; designed to meet demands of architects, and have all engineering advantages of the DeLuxe heater plus new styling elegance; features include a removable base for wall-hung units; a new key-operated two-speed key switch that is operated through the grill, removing the need for an access door; a one piece front panel for fully recessed wall or ceiling applications; and easy access to all parts by the removal of only two chrome-plated key-operated screws on the front panel. Wide choice of colors, many two-tone designs; applicable to all public, institutional and commercial type buildings. Technical details are available by writing DEPT-A&A, Heating and Ventilating Department, American Air Filter Co., Inc., 215 Central Ave., Louisville 8, Ky.

Electronic comfort control. A new 24-page booklet entitled "The Electronic Control Story" is now available to aid architects, engineers and contractors in understanding the fundamentals of electronic temperature controls and their application. Complete with simplified, easy to understand diagrams, it deals with basic elements of electronic control: including bridge circuit, sensing elements, types of control, and control applications. Also delves into on-off temperature control, humidity controls, and outdoor reset hot water control. You may obtain a copy by writing DEPT-A&E, Barber-Colman Co., Rockford, Ill.

Oil heaters. 81page booklet illustrates design and construction features, shows application and installation information; engineering data on 200,000 or 250,000 Btu per hour capacity, warm air, oil or gas fired space heaters. Medium sized, completely packaged, ideally suited for commercial applications, i.e., supermarkets, service stations, garages, show rooms, recreation centers, stores, offices, agricultural buildings, warehouses, and other industrial applications. Copy free, write DEPT-A&E, Dravo Corp., 1203 Dravo Bldg., Pittsburgh 22, Pa.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	" 35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)	$1.25
Carload lots, in bulk, per bbl.	3.40
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $4.00 per bbl. f.o.b. warehouse or delivered.	
Cash discount on L.C.L.	2%
Trinity White, Medusa White, Calaveras White	1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $12.05

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .20	$ .20
6x8x16-inches, each	.24	.245
8x8x16-inches, each	.28	.28
12x8x16-inches, each	.41	.41
12x8x24-inches, each		.62

Haydite Aggregates—

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Weterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	⅝x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390.00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/16 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/16 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/16 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/16 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3½") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-S1S $135.00
½-inch, 4.0x8.0-S1S 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (8asis 7¾ lbs. per gal.)		Raw	Wholesale Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (8asis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12', $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless.
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .40	$ .36
6 x 12 x ⅞-inch, plain	.44	.39
6 x 6 x ⅞-inch, plain	.46	.42

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00

Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle: 1500 First Ave. S., EL 4711
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-7834

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond, 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
F. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS, INC.
South Linden & Tanforan Ave.
South San Francisco: JU 4-8362

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (19)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-7834

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4104

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

SEWER PIPE (32)
GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES
(ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

BAKERSFIELD COLLEGE, Bakersfield, Kern county. Kern Union High and Junior College District, Bakersfield, owner. Group 1, area D, comprising humanities building, science and enginering, business administration, trades and industries, economics, boiler room and equipment; reinforced concrete construction, air conditioning, utilities — $3,424,000. ARCHITECT: Wright, Metcalf & Parsons, Bakersfield. GENERAL CONTRACTOR: James I. Barnes Co., Redwood City.

FACTORY BLDG., Burlingame, San Mateo county. Guitard Chocolate So., San Francisco, owner. 1-story reinforced concrete, tilt-up construction, wood roof trusses, sprinkler system—$300,000. GENERAL CONTRACTOR: Cahill Const. Co., San Francisco.

SHOPPING CENTER, East Long Beach, Los Angeles county. L. S. Whaley Co., Long Beach, owner. Excavating, pile driving; 2-story, basement, reinforced concrete, 107,000 sq. ft. space: Unit B will be 1-story and basement of 101,000 sq. ft. space and Unit C will be part basement and 1-story containing 73,000 sq. ft. space. Units B and C will contain 21 stores: work includes structural steel, concrete work, built-up roofing, concrete, terrazzo and asphalt tile floors, metal windows, plastering, acousticsal work, elevators, escalators, plate glass, electrical, heating and ventilating, metal work, ceramic tile, sheet metal; parking facilities for 1800 automobiles. ARCHITECT: Welton Becket & Associates. Los Angeles. GENERAL CONTRACTOR: Millie & Severson, Long Beach.

METHODIST CHURCH, Phoenix, Arizona. Central Methodist Church, Phoenix, owner. Administration building 108 x 31 ft., Chapel building 80 x 33 ft., masonry construction, mission tile roofing, slab and asphalt tile, gas heating, refrigerated system, insulation, steel sash, terrazzo, ceramic tile, cast stone, metal doors and frames—$99,500. ARCHITECT: Lescher & Mahoney, Phoenix. GENERAL CONTRACTOR: Farmer & Godfrey, Phoenix.

WILDLIFE MANAGEMENT BLDG. Arcata, Humboldt county. State of California, Sacramento, owner. Wood frame buildings, concrete slab on grade, composition roofing, wood siding, wood, metal sash and doors, wallboard partitions, cabinet work, floor coverings, hatchery equipment, mechanical and electrical, area pav-

ing — $312,913. GENERAL CONTRACTOR: George W. Reed, Sacramento.

BANK ADDN., Bell, Los Angeles county. Bank of America, San Francisco, owner. 1-story and mezzanine, reinforced concrete addition, 110 x 38 ft.; composition roofing, concrete floor, terrazzo, acoustical work, structural metal, sheet metal, painting, plastering, plumbing, electrical work, heating, ventilating — $66,675. ARCHITECT: Raymond Shaw, Capitol Company, Los Angeles. GENERAL CONTRACTOR: Stiglbauer Bros., Downey.

LYTTON HALL, Healdsburg, Sonoma county. Salvation Army, San Francisco, owner. Concrete block and frame construction; Hall and Social Building, 7,000 sq. ft. floor space — $99,880. ARCHITECT: J. Francis Ward, San Francisco. GENERAL CONTRACTOR: Frank Z. Towle, Jr., Healdsburg.

VETERANS MEMORIAL BLDG., Earlimart, Tulare county. South Tulare County Memorial District, Tulare, owner. Frame and stucco construction, rigid wood arches, plaster and plywood interior — $106,619. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Lewis C. Nelson & Son, Selma.

SCHOOL, Washington Manor, San Lorenzo, Alameda county. San Lorenzo Elementary School District, San Lorenzo, owner. Addition consisting of 5 classrooms, library, home-making, speech room, storage room; frame and stucco construction, $194,350. ARCHITECT: Schmidts &

BUILDING TRADES WAGE RATES (JOB SITES) CALIFORNIA

Following are the hourly rates of compensation established by collective bargaining, reported as of October 1954

UNION HOURLY CONTRACT WAGE RATES

CRAFT	San Francisco	Alamada	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15	$3.15
BOILERMAKER	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05	3.05
BRICKLAYER	3.55	3.50	3.50	3.35	3.50	3.25	3.625	3.55	3.40	3.35	3.35	3.25	3.30
BRICKLAYER, HODCARRIER	2.75	2.75	2.75	2.60	2.65	2.60	2.75	2.60	2.40	2.40	2.475	2.625	2.30
CARPENTER	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.775	2.75	2.775	2.855
CEMENT FINISHER	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.745	2.70	2.70	2.70	2.70	2.70
CONCRETE MIXER—Skip Type (1-yd.)	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.455	2.52	2.52	2.50	2.52	2.52
ELECTRICIAN	3.075	3.075	3.00	3.10	3.125	3.00	3.28	3.00	3.20	3.20	3.125	3.20	3.10
ELEVATOR CONSTRUCTOR	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.23	3.21	3.21	3.21	3.21	3.21
ENGINEER: MATERIAL HOIST	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.735	2.60	2.60	2.57	2.60	2.60
GLAZIER	2.55	2.55	2.55	2.51	2.585	2.585	2.55	2.55	2.585	2.585	2.59	2.51	2.51
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.80	2.80	2.80	2.80	2.80
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.05	2.075	2.075
CONCRETE	2.075	2.075	2.075	2.075	2.075	2.075	2.075	2.075					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00	3.4375	3.125	3.4375	3.375	3.25	3.4375	3.25
MARBLE SETTER	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	2.875		3.05		
MOSAIC & TERRAZZO									3.07	2.97	3.05	2.97	
PAINTER—BRUSH	2.70	2.70	2.70	2.625	2.725	2.615	2.70	2.85	2.73	2.70	2.70	2.82	2.66
PAINTER—SPRAY	2.70	2.70	2.70	2.875	3.01	2.615	2.70		2.98	2.95	3.25		2.91
PILEDRIVER—OPERATOR	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.075	3.09	3.09	2.88	3.09	3.09
PLASTERER	3.4625	3.54	3.54	3.275	3.25	3.30	3.43	3.30	3.4375	3.4375	3.25	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.00	3.1875	3.125	3.00	3.00	2.875
PLUMBER	3.05	3.25*	3.30†	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
ROOFER	2.75	2.75	2.75	2.625	2.75	2.75	2.75	2.75	2.75	2.65	2.75	2.75	2.70
SHEET METAL WORKER	3.00	3.00	3.00	3.00	3.00	2.95	3.00	3.00	3.00	3.00	3.00	3.025	3.00
SPRINKLER FITTER	3.15	3.15	3.15				3.15	3.15	3.25				
STEAMFITTERS	3.05	3.25	3.25	3.125	3.25	3.125	3.25	3.25	3.25	3.25	3.25	3.25	3.25
TRACTOR OPERATOR	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.68	2.68	2.65	2.68	2.68
TRUCK DRIVER—½ Ton or less	2.10			2.10	2.10	2.10	2.10	2.10	2.18	2.18	2.13	2.18	2.18
TILESETTER	3.10	3.10	3.10	3.00	2.875	2.875	3.10	3.10	3.00	3.00	3.05	2.85	3.00

*Includes 12½c paid for vacation. †Includes 30c paid for vacation and holidays.

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by buildings trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions made as information becomes available.

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Hardman, Berkeley. GENERAL CONTRACTOR: Wallace Webb & Son, Hayward.

STUDENT UNION, Hartnell Jr. College, Salinas, Monterey county, Hartnell Jr. College, Salinas, owner. Student Union building consisting of cafeteria, kitchen, meeting room, and lounge; frame and stucco construction. $104,783. ARCHITECT: Jerome Kasavan, Salinas. GENERAL CONTRACTOR: Tombleson & Huck, Salinas.

ELEMENTARY SCHOOL, Taft, Kern county. Taft City School District, Taft, owner. New elementary school building consisting of 10 classrooms, 2 kindergartens, toilet rooms; frame and stucco construction, shingle roof, ceramic tile, aluminum louvers, steel roof trusses, insulation, asphalt tile floors, acoustical tile, sheet metal, heating and ventilating equipment, 30,000 sq. ft. of floor area, $455,587. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: W. D. Foote, Bakersfield.

FURNITURE STORE, Fresno. Turpins Furniture Co., Fresno, owner. 1 story with basement and penthouse; reinforced concrete and structural steel, elevator; 24,785 sq. ft. floor area, $200,000. ARCHITECT: Walter Wagner, Fresno. GENERAL CONTRACTOR: Harris Constn. Co., Fresno.

JUVENILE HALL, County Farm, Marin county. County of Marin, San Rafael, owner. Remodel present nurses' home and juvenile hall, add classrooms and an activities room; frame and stucco construction. $93,051. ARCHITECT: Hammond & Woodbury, San Rafael. GENERAL CONTRACTOR: Fairchild Constn Co., Fairfax.

ELEMENTARY SCHOOL, MacDoel, Siskiyou county. MacDoel Elementary School District, MacDoel, owner. Construction consists of 4 classrooms, administration, and toilet rooms; frame and brick veneer, $111,143. ARCHITECT: Howard R. Perrin, Klamath Falls, Oregon.

BANK BUILDING, Yerington, Nevada. First National Bank of Nevada, Reno, owner. 1 story concrete block, structural steel construction with concrete vault; 3,500 sq. ft. floor area, $74,485. ARCHITECT: Ferris & Erskine, Reno. GENERAL CONTRACTOR: Frank Capriotti, Reno.

OFFICE-SHOP, San Leandro, Alameda county. Taylor Instrument Co., San Francisco, owner. 1 story office building of 4,800 sq. ft. floor area; shop of 12,000 sq. ft. floor space; structural steel frame, precast concrete walls, continuous steel sash, gypsum roof deck, concrete floors. STRUCTURAL ENGINEER: Robert D. Dewell, San Francisco. CONSULTING ENGINEER: Ashen & Allen, San Francisco. ELECTRICAL & MECHANICAL ENGINEER: James E. Gaynor, San Francisco. GENERAL CONTRACTOR: Swinerton & Walberg, Oakland.

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HOTEL, RIVER QUEEN, Reno, Washoe county, Nevada. Wm. Moore, representing a Corpn, Reno, owner. Work comprises building of 200 rooms and baths, casino, dining room, kitchen; 2 story, frame and stucco, brick veneer, concrete floors, some structural steel, reinforced concrete construction, $2,000,000. ARCHITECT: Vick & Sharp, Las Vegas, Nevada. GENERAL CONTRACTOR: Turner Constn Co., Las Vegas.

ELEMENTARY SCHOOL, Fresno. Fresno Elementary School District, Fresno, owner. Alvina Elementary School consisting of administration rooms, kitchen, kindergarten, toilet rooms; frame and stucco construction, $243,400. ARCHITECT: William Hastrup, Fresno. GENERAL CONTRACTOR: Lewis C. Nelson & Son, Selma.

ANIMAL HOSPITAL, Belmont, San Mateo county. Dr. George Bertetta, owner. 1 story frame and stucco construction, concrete and terrazzo floors, $62,446. ARCHITECT: Mario Corbett, San Francisco. GENERAL CONTRACTOR: Roberts & Co., Hillsborough.

AVIATION GASOLINE STORAGE, Bulk system, McClellan Air Force Base, Sacramento county. Corps of Engineers, Sacramento, owner. Underground storage tanks, pumps, piping, electrical work, water system, drainage; nine 50,000 gallon tanks, $207,702. GENERAL CONTRACTOR: Baldwin Constn Co., San Rafael.

NEWSPAPER BUILDING, Santa Rosa, Sonoma county. Santa Rosa Press-Democrat, Santa Rosa, owner. Remodel interior of present 2-story building; new reinforced concrete foundation for new printing press, $35,000. STRUCTURAL ENGINEER: H. M. O'Neil Co., Oakland. GENERAL CONTRACTOR: Emil Person, Oakland.

ELEMENTARY SCHOOL, Mission San Jose, Alameda county. Mission San Jose Elementary School District, Mission San Jose, owner. New school consisting of 12 classrooms, kindergarten, kitchen, multipurpose, toilet rooms; frame and stucco construction, $315,964. ARCHITECT: Higgins & Root, San Jose. GENERAL CONTRACTOR: E. A. Hathaway Co., San Jose.

STORE BLDG., Beverly Hills, Los Angeles county. Beverly Hills Development Company, Beverly Hills, owner. Reinforced brick store building, tapered steel girders, composition roofing, concrete slab, plaster, electrical work, plumbing, complete air conditioning, aluminum sections, plate glass, marble work, asphalt paving, 4500 sq. ft. floor area. ARCHITECT: Paul Williams, Los Angeles. GENERAL CONTRACTOR: Del E. Webb Constn Co., Los Angeles.

DRUG STORE AND SHOPS, Fresno. (see architect for owner). Drug store will be 63x140 ft. in area, and shops will be 60x160 feet in area; concrete block and mosaic tile veneer, porcelain enamel panels, plate glass, steel columns, concrete slab, asphalt tile, aluminum and glass doors, corrugated plastic sign, air conditioning, plumbing, electrical work, asphalt paving. ARCHITECT: Carl L. Maston, Los Angeles. GENERAL CONTRACTOR: Clarence Ward Constn Co., Fresno.

ELEMENTARY SCHOOL, Fairfield, Solano county. Fairfield Elementary School District, Fairfield, owner. Solano Elementary School building consisting of 12 class rooms, shop building, kindergarten, kitchen, multi-purpose and toilet rooms; 1-story frame and stucco construction; 25,000 sq. ft. of floor area, $328,167. ARCHITECT: Schmidts & Hardman, Berkeley. GENERAL CONTRACTOR: B & R Constn Co., San Francisco.

OFFICE BLDG., Ontario, San Bernardino county. California Department of Motor Vehicles, Sacramento, owner. Composition roofing, metal sash, interior plaster, waterproofed block walls, forced air heating, glazed interior partitions, slab and asphalt tile floors, toilets, acoustical tile ceilings, ceramic tile and terrazzo floors in toilets, off-street parking, plumbing, electrical work; 2400 sq. ft. floor area. ARCHITECT: Pierre Woodman, Ontario. GENERAL CONTRACTOR: Earle T. Casler, Upland.

WAREHOUSE, Pasadena, Los Angeles county. E. K. Earl, Jr., Pasadena, owner. 1-story, reinforced concrete tilt-up panel warehouse building; composition roofing, steel roll-up doors, partially raised concrete slab floors, railroad spur, electric wiring, toilet rooms and plumbing roughed-in for other facilities; 20,000 sq. ft. floor area, $120,000. ENGINEER: Frank O. Bigelow, Pasadena. GENERAL CONTRACTOR: E. K. Earl, Jr., Pasadena.

INTERMEDIATE SCHOOL, Newark, Alameda county. Newark Elementary School District, Newark, owner. New school building of 8 classrooms, administration facilities, home-making, shops, toilet rooms; frame and stucco construction, $297,600. ARCHITECT: Falk & Booth, San Francisco. GENERAL CONTRACTOR: George Bianchi, San Jose.

MOTEL, Los Angeles. (see engineer for owner). 2-story, 24-unit frame and stucco construction; 70x159 feet, composition roofing, carpeted, linoleum and asphalt tile floors, interior plaster work, central gas water heater, single gas wall heaters, tile baths and stall showers, kitchen facilities, wrought iron railing, sliding and casement steel sash, stone veneer, electric bathroom heaters, asphalt parking area, $66,500. ENGINEER: R. W. Hall, Los Angeles. GENERAL CONTRACTOR: L. & D. W. Dresser, Los Angeles.

FRENCH HOSPITAL, San Francisco. French Hospital of San Francisco, owner. Remodel maternity ward and second floor of present building, $38,459. ARCHITECT: Hurt, Trudell & Berger, San Francisco. GENERAL CONTRACTOR: Jos. L. Barnes, San Francisco.

STATLER YOUTH CENTER, Perris, Riverside county. Perris City Council, Perris, owner. 1-story Memorial (Ellsworth M. Statler) reinforced masonry recreation building; composition gravel roof, steel sash, plate glass, forced air heating, evaporating coolers, block planters, slab floors, large barbecue, library and fix-

tures, outdoor play area, interior stud and plaster partitions, roof insulation, ceramic tile floors and wainscots in toilets, concrete walks and approaches, solid core slab doors, plumbing, electrical work, $32,250. ARCHITECT: Boldton Caldwell Moise, Riverside. GENERAL CONTRACTOR: L. J. Lambert Co., Riverside.

LUCKY MARKET, Centerville, Alameda county. Lucky Stores, Inc., San Leandro, owner. One in a group of stores in new shopping center; 1-story, concrete block, some structural steel, wood roof, $300,000. ARCHITECT: Cecil S. Moyer, Oakland. GENERAL CONTRACTOR: A. S. Holmes & Son, Oakland.

IN THE NEWS

COMMUNITY CHURCH

Work will start immediately on construction of a frame and stucco, with built-up roof, Community Baptist Church in Westlake, near Daly City, for the Westlake Community Baptist Church.

Architect Enar Eric Holm of San Francisco has prepared the plans and estimates the project will cost $100,000.

FRESNO MAGNIN'S

Architect Walter Wagner of Fresno, is completing plans for construction of a I. Magnin store building to be built in Fresno at Calaveras and Van Ness streets.

The building will be of 1 and 2-story design and will contain about 15,000 sq. ft. of floor area.

MIKRO-SIZED TILE ANNOUNCED

A new type tile, that speeds setting time and ends troubles caused by variation in tile sizes, has been perfected by Gladding, McBean & Co.

Described as the most important development in twenty years of tile making, Mikro-sized tile differs from standard tile in that it has spacing lugs on two adjacent edges only. These lugs are twice the size of regular lugs, thus providing standard 3/64 in. joints. The other two edges of the new tile are precision ground, assuring absolute uniformity of size.

The new Mikro-sized Hermosa tile is available in both 4-1/4" x 4-1/4" and 6-1/4 x 4-1/4" sizes.

ARCHITECTS FOR LIBRARY

A new library for the Presidio of San Francisco will be designed by Donald Beach Kirby & Associates, who have been commissioned architects and engineers for the project.

The new building will face the main parade ground and will be near the Post Exchange and Theater. An area of some 6,000 sq. ft. will house the Los Library as well as the Sixth Army collection.

Included in the facilities will be a special West Point room, a children's room and study room, and a sound proof music room for playing records.

FEDERAL FUNDS ALLOCATED

The Vaca Valley Union Elementary School District, Vacaville, Solano county, has been allocated $180,473 in Federal funds to be used in the construction of additional facilities in the Elementary schools of the district.

ARCHITECT SELECTED

Architect J. Clarence Felciano of Santa Rosa, has been commissioned by the Trustees of the Cottonwood Elementary School District in Shasta county, to design an addition to the Cottonwood Elementary School.

STUART GREENBERG GIVEN HONOR

Stuart Greenberg, president of M. Greenberg's Sons and Josam-Pacific Co., of San Francisco, was recently installed in the Quarter Century Club of Josam Manufacturing Co., of Michigan City, Indiana, at impressive ceremonies in the Indiana city.

Josam-Pacific Co. was established over 25 years ago to handle the distribution of the Josam line of drains, interceptors, swimming pool fittings and marine drainage products on the West Coast.

Along with Greenberg, 35 other Josam employees and sales representatives were honored as charter members in the Quarter Century Club.

PLAN 1955 EXTENSION ENGINEERING STUDY

Plans for a 1955 Engineering and Management Course for business and industrial personnel have been completed by the College of Engineering and the School of Business Administration on the Los Angeles campus of the University of California.

First of its kind to be offered on the Pacific Coast, it will be held from January 31 to February 11, with daily sessions, according to Ralph M. Barnes, professor

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of engineering who heads the planning committee.

The University planning committee includes the course of co-ordinator, Edward Coleman, professor of engineering and production management; Professor Barnes; L. M. K. Boelter, dean of the College of Engineering; John C. Dillon, Engineering Extension; Malcolm F. Heslip, Business Administrataion Extension; and George W. Robbins, acting dean of the School of Business Administration.

FEDERAL FUNDS FOR HIGH SCHOOL

Federal funds in the amount of $588,224 have been allocated for the construction of new High School Buildings at the Ambrose School in West Pittsburg. Construction will consist of 11-classrooms, home making and administration facilities, 2-shop buildings, arts and crafts, speech, music, gymnasium, boys and girls locker rooms, and toilet rooms.

Anderson & Simonds, Reynolds & Chamberlain, Confer & Willis, and John Lyon Reid, Oakland, are the associated architects and engineers.

ATHOLL McBEAN HONORED

Atholl McBean of Gladding, McBean & Co., and William C. Hays, professor of architecture at the University of California, were recently named the San Francisco Bay Area construction industry's "Men of the Year."

Recognition of McBean and Hays took place at the Building Industry Conference Board's "Annual Achievement Awards Dinner" in the St. Francis Hotel. McBean was presented with the "Achievement Award" and Hays with the "Honorary Award."

Over 300 builders, contractors, architects, engineers and building materials suppliers attended the dinner. Ralph A. Tudor, San Francisco consulting engineer and recently Undersecretary of the Interior was the guest speaker, with Carl A. Gellert, board chairman of the Conference, chairman of the annual affair.

ARCHITECT SELECTED

The architectural firm of M. L. Pereira & Associates of Chicago, Ill., have been commissioned to design a publishing building in San Francisco for the Wall Street Journal.

The building will be of 3-story and basement, interior and exterior remodel plus new foundations for the printing press equipment.

SCHOOL BONDS APPROVED

Voters of the Petaluma High School District recently approved issuance of $1,750,000 in school bonds, with proceeds to be used for the construction of a new Junior High School Building in the City of Petaluma.

Architect Robert Stanton, Carmel, is the architect for the work.

ELECTRONICS LABORATORY

The Kaiser Corp., Oakland, announced they will soon start construction of 1-story, 12,000 sq. ft. floor space, structural steel frame and reinforced concrete Electronics Laboratory on a site acquired some time ago near the Stanford University campus in Palo Alto.

Cost of the building will run about $150,000.

SEMI-RECESSED WALL FOUNTAIN

The Haws Drinking Faucet Co. have announced a new semi-recessed wall fountain in 18 gauge, type 304, stainless steel, No. 4 finish, with drinking faucet head and operating lever conveniently located on opposite sides of a smartly-designed platform.

The new fountain, known as Haws Model 73, is a handsome, general drinking water facility for public and office buildings, schools, hospitals and restaurants. An access panel in the wall is not required; all fittings are accessible from under bowl; take up little floor space.

An angle-stream drinking fountain head is chrome plated brass; operating lever, waste strainer and all lag screws and washers are also chrome plated. Complete details from Haws Drinking Faucet Co., Berkeley, Calif.

APPOINTED NEW ZONE MANAGER

John Murray has been appointed Kansas City zone manager of the Thor Corp. of Chicago, according to a recent announcement by Thomas R. Chadwick, general sales manager.

DAMES & MOORE OPEN OFFICES

Dames & Moore, soil mechanics engineers, have announced opening of new offices in Atlanta, Georgia, with Benjamin S. Persons being named the Resident Partner of the new office.

General offices of the firm are main-

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tained in Los Angeles, with offices in San Francisco, Portland, Seattle, Salt Lake City, Chicago, New York and London, England.

ACOUSTICAL ENGINEERS

Jerry Barr and George Carriers have formed the D. Gerald Barr Company with general offices in Oakland, and will engage in the acoustical engineering field of construction.

The firm will specialize in acoustical engineering and contracting and will also distribute a number of acoustical products.

ARCHITECTS MERGE FIRMS

Architect Donald G. French and Architect Donnell E. Jaekle, recently announced the association of their practice of architecture under the firm name of Donnell E. Jaekle, Architect; Donald G. French, Associate Architect. Offices are located at 586 North First Street, San Jose.

French formerly practiced from offices in San Bruno.

SCHOOL BONDS VOTED

Electors of the Stockton Unified School District, Stockton, recently approved issuance of $7,750,000 in school bonds, with proceeds to be used for construction of new school buildings and additions to some of the existing structures.

ARCHITECT MOVES

The architectural office of Donald Powers Smith, A.I.A., is now located at 133 Kearny Street, San Francisco, where larger space has been acquired for the general practice of architecture.

THERMADOR HAS NEW FAN HEATER

A new low wattage Wall Heater Fan that is sturdy, compact, safe, and easily and quickly installed has been announced by Thermador Electrical Mfg. Co. of Los Angeles.

Separate switches for fan and heat are located near top of heater for more convenient operation and a new Neon indicator glows when heater is working; unit has a louver grille which forces the flow of warmed air downward to warm room from the floor up. Resistance coils are Nichrome wire and fan action induces constant air flow over coils preventing oxidation and deterioration through red glow and maintaining even "black heat".

Operation is quiet; heavy duty motor is single phase induction type; 4-blade fan dynamically balanced, finished in bronze, white enamel or stainles steel.

MEDICAL OFFICES

Architect Thomas P. Dunlap of Chico, has completed drawings for the construction of two suites of offices in a Medical Building to be built in Yuba City for W. A. Kemp.

The structure will be of 1-story concrete block and frame construction; will contain 2,200 sq. ft.

ALL TEMPERATURE WIRE MARKERS

A new all temperature wire marker that withstands continuous heat to 300 DF, intermittent heat to 450 df, and continuous cold to —300 df, has been announced for

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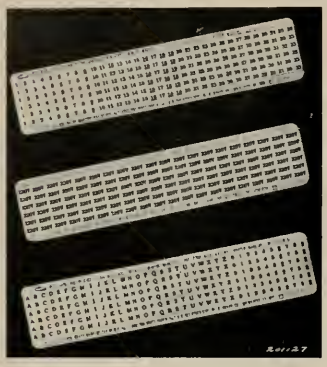

Ready to use, the markers are manufactured by W. H. Brady Co, 727 W. Glendale Ave., Milwaukee 12, Wis.

CITY HALL AND POLICE STATION

Architects Marsh, Smith & Powell of Los Angeles, are completing plans for construction of a 1-story and part basement, reinforced brick and concrete city hall and police station in El Segundo for the City of El Segundo.

The buildings will contain 20,000 sq. ft. of floor area; composition roofing, concrete floor, security equipment, acoustical work, metal sash, forced air heat, painting, electrical work, plastering.

SAN MATEO HOTEL

Robert M. Sherman of San Mateo is completing plans for construction of a 200 room, 2-story reinforced concrete and frame Hotel to be built in the 4000 Block South El Camino Real in San Mateo.

The project also includes a swimming pool, bar, hotel lobby, restaurant, a group of shops, and special rooms for public use.

Owners of the property, the California Peninsula Hotels, Inc., estimate the cost of construction will be in excess of $2,000,000.

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